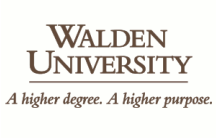

2019

Sources of Financial Education and Use of Alternative Financial Services

Stefan Ignatovski
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This is to certify that the doctoral dissertation by

Stefan Ignatovski

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2019

Abstract

Sources of Financial Education and Use of Alternative Financial Services

by

Stefan Ignatovski

MS, Roosevelt University, 2012

BS, Indiana State University, 2010

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management

Walden University

May 2019

Abstract

As the lending practices of the alternative financial services (AFS) industry harm many consumers and consumers' access and use of traditional credit are restricted, the use of AFS is a growing concern. The financial education of consumers determines their financial behavior, which may be inadequate to make effective financial decisions regarding high-cost borrowings. The purpose of this quantitative study was to examine if and to what extent the sources of financial education is related to the use and frequency of use of AFSs among U.S. consumers. The theory of planned behavior and the transtheoretical model of change shaped the theoretical framework for this study. An explanatory correlational design was used to analyze archival data collected by the FINRA Investor Education Foundation for their 2015 National Financial Capability Study. Binary logistic and negative binomial regression analyses indicated that exposure to formal financial education did not contribute to reduced use and lower frequency of use of AFSs but, instead, contributed to the exact opposite. Only parental financial education was found to contribute to reduced use and lower frequency of use of AFSs. One-way ANOVA analyses indicated that all forms of financial education contributed to increased perceived financial knowledge. This study may lead to positive social change by informing policymakers about the necessary steps to remedy the problem of continuous AFS usage and serving as a foundation for future studies that should consider other factors beyond formal financial education that could influence the use and frequency of use of AFSs.

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Dedication

I dedicate this dissertation to my family. Grandfather Tomislav Dimovski, you taught me the principles of integrity and honesty. You were my example of what it means to strive, work hard, and thrive in life. You were my inspiration for dedication and patience. Your stories will always narrate in my head. You will always be my guide going forward. My mother, Suzana Ignatovska, taught me how to be fair and just. You are the one who made me believe that I could achieve anything I wanted. You always made sure I was on the right path. Without your strength, patience, care, persistence, and love, none of this would have been possible. You are the one that sacrificed everything to see me succeed, and that is priceless. My father, Mile Ignatovski, taught me about optimism and independence. You were my example of how to fight for what is right. You taught me that principles and justice are everything. You are my inspiration for self-confidence. Because of you, I always believed in myself. Last, but not least, I dedicate this dissertation to my brother, Martin Ignatovski. Younger brothers follow their older brothers everywhere, and I did the same. Trust me, it is much easier to follow while you walked the path for us both. You were the one who enlightened that path, making mine a much easier journey. I was never afraid of what was ahead of me, because you had already cleared the way for me, like a guiding star.

You are all my heroes.

Acknowledgments

This educational journey would not have been possible without the help of many people. While many deserve to be acknowledged in this section, I will provide special acknowledgment to several people. My committee members were instrumental to my doctoral achievement. I want to provide a special gratitude to the members of my dissertation committee Dr. Maja Zelihic and Dr. Steven Tippins. I only went through this process successfully because of your guidance, mentorship, knowledge, and feedback. I want to specifically thank You for your support throughout this process. Your patience and wisdom played a pivotal role to my achievement. Thank you!

I also want to thank Dr. Sunil Hazari who provided much-needed feedback that contributed to the quality of my dissertation. Further, I want to thank Dr. Sandy Kolberg for all her support and patience with all my requests throughout this journey. Finally, I want to thank Dr. Gary Mottola for granting me the permission to use the National Financial Capability Study data for the purposes of my study.

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Chapter 1: Introduction to the Study

The United States economy is one of the largest in the world (Li, 2017). However, many U.S. consumers are financially illiterate, which negatively influences their financial behaviors such as debt (Birkenmaier & Fu, 2016a; Eichelberger, Mattioli, & Foxhoven, 2017; Garg & Singh, 2018). There are also greater income inequality and an increasing rate of poverty in the United States over time (Chokshi, 2018). Additionally, access to credit has become more stringent and limited (Begley & Purnanandam, 2018; Colarusso, 2017; Horowitz, 2017). Issuance of credit is closely related to the credit profile and income of the individual, and in some cases, there are discriminatory practices towards poor and minority consumers (Begley & Purnanandam, 2018). As a result, many consumers turn to alternative financial services (AFSs) such as auto-title loans, payday loans, pawnshop stores, and rent-to-own stores. These services are extremely expensive financial instruments for consumers when compared to traditional forms of credit (Colarusso, 2017; Fitzpatrick & Coleman-Jensen, 2014; Friedline & Kepple, 2017).

Financial education can improve consumers' financial behaviors, but there is a lack of assessment regarding how various sources of financial education affect the use of AFSs. This study may lead to positive social change by understanding if sources of financial knowledge deter consumers from unhealthy and high-cost borrowings, and inform policymakers about the steps needed to remedy the problem of continuous AFS usage. The following chapter consists of a background to the study, problem statement, research questions, and hypotheses. The researcher also discusses the theoretical

foundation and nature of the study. Finally, the researcher describes the study's assumptions, scope and delimitations, limitations, and significance.

Background of the Study

About 25% of Americans use AFSs (Harvey, 2019). Payday loans can be harmful to consumers, and legal reform that will increase competition among creditors regarding short-term loans might be necessary (Horowitz, 2017). Some of the harmful effects of AFS result in consumers being unbanked and reporting poor or fair health (Eisenberg-Guyot, Firth, Klawitter, & Hajat, 2018). Sweet, Kuzawa, and McDade (2018) said there was an association between payday loans and borrowers who suffer from poor health factors such as higher body mass index and self-reported symptoms of poor physical health and anxiety.

Payday lending contributes to the deteriorated welfare of individuals and difficulty paying bills, increased likelihood of Chapter 13 bankruptcy, bank account closures, and a decrease in property values (Lim et al., 2014). The consumers that use AFSs often lack financial knowledge and education, have lower incomes, or lack bank accounts (Birkenmaier & Fu, 2016b). Financial education can provide American consumers with much-needed fiscal management skills that can determine economic prosperity or insecurity. Financial education offered at various venues can improve many skills and abilities of consumers, including financial behaviors (Anderson & Card, 2015).

Fiscal education has improved consumers' debt repayment behavior (Brown, van der Klaauw, Zafar, Grigsby, & Wen, 2016); improved consumer credit measures (Cornwell & Murphy, 2016); reduced use of payday borrowing (Harvey, 2019); more

accurate processing of financial disclosures (Lee, Yun, & Haley, 2017); improved financial literacy levels (Pintye & Kiss, 2016); improved likeliness to budget; perform asset allocation assessment; increased contributions for retirement (Prawitz & Cohart, 2014); better performance in objective and subjective financial literacy; desirable financial behavior, and financial capability index; and, positively affecting financial satisfaction (Xiao & Porto, 2017). Previous research has explored consumer debt behavior, including the use of AFSs. However, most of this research has focused on identifying factors associated with debt behavior, rather than the effect of financial education on the use of high-cost borrowing vehicles.

Few scholars have evaluated the effects of financial education on the use of AFSs. Further research is necessary for this field since the American population, and especially young people, have experienced financial stress (FINRA Investor Education Foundation [FINRA], 2016). Most AFSs (payday loans, auto-title loans, pawnshop stores, and rent-to-own stores) are perceived as a solution by consumers, but instead, they might exacerbate financial stress, since they often include fees and high rates of interest. Americans have experienced low saving rates, rising bankruptcy rates, and high consumer debts, which are indicators of personal financial difficulties. The relationship between financial education and the use of AFSs is the topic of this study, due to their importance in shaping the financial position of the American population. Financial knowledge is a significant predictor of positive financial behavior (Woodyard, Robb, Babiarz, & Jung, 2017) and plays a significant role in financial stability. There is a

pressing need for financial education programs in high schools, colleges, workplaces, and the military.

Problem Statement

Lin et al. (2016) reported a continuous use of AFSs among 26% of U.S. consumers. These AFSs have high interest rates and substantial fees, resulting in more significant debt than the principal in a short period (O'Neill & Xiao, 2015). In 2016, consumers spent approximately $173 billion on nonbank fees, which includes AFS fees (Center for Financial Services Innovation, 2017). Birkenmaier and Fu (2016b) identified an overall demand for AFSs among many U.S. consumers, which they attributed to a lack of financial knowledge, low income, and a lack of bank account. The AFS lending industry targeted their marketing and location of their stores in geographical areas of these vulnerable populations, where they often represent the only source of credit (Barth, Hilliard, & Jahera, 2015; Barth, Hilliard, Jahera, & Sun, 2016).

The general problem is that the predatory lending practices of the AFS industry harm many consumers. The users that these high-cost borrowing vehicles affect most acutely are minorities, young adults, low-income individuals, and individuals with low levels of education and financial literacy (Barth et al., 2015; Begley & Purnanandam, 2018; Birkenmaier & Fu, 2016a; Carter, 2015; Koku & Jagpal, 2015; O'Neill & Xiao, 2015). The use of AFSs has negatively impacted users by contributing to poor emotional and physical health (Eisenberg-Guyot et al., 2018; Sweet et al., 2018), difficulty in paying bills, increased likelihood of Chapter 13 bankruptcy, bank account closures, and decreased property values (Lim et al., 2014; Melzer, 2011).

The specific problem is that the source of consumers' financial education determines their financial behavior, which may be inadequate to make effective financial decisions. Efficient and effective fiscal management and financial behavior require skills that individuals could obtain through formal financial education and learning how to manage finances from parents (Kim, Huang, Sherraden, & Clancy, 2017; Tang, 2017; Tang & Peter, 2015; Van Campenhout, 2015; Widayati, 2015). Literature has not yet addressed the effect of various sources of financial education on the use and frequency of use of AFS. This study contributed to the body of knowledge needed to address this problem by investigating the relationship between sources of financial education and the use and frequency of use of AFS.

Purpose of the Study

The purpose of the quantitative correlational study is to examine if and to what extent sources of financial education are related to the use and frequency of use of AFS among U.S. consumers. The independent variables were the different sources of financial education where participants obtained their financial education, operationalized as high school, college, workplace, military, and parents/guardians. The dependent variables were the types and frequency of AFSs that the participants used, including payday loans, auto-title loans, pawn shops, and rent-to-own stores. Financial education can improve many financial behaviors and the financial decision-making of individuals, but it is unknown how sources of financial education relate to the use and frequency of use of AFSs. This study used reliable and validated data collected through a national

survey collected by the FINRA Foundation for their National Financial Capability Study to assess the variables under examination.

Research Questions and Hypotheses

RQ1: To what extent, if any, is the source of financial education related to the type of AFS used?

$H_0$1: The source of financial education is not related to the type of AFS used.

H_a1: The source of financial education is related to the type of AFS used.

RQ2: To what extent, if any, is the source of financial education related to the frequency of use of AFS?

$H_0$2: The source of financial education is not related to the frequency of use of AFS.

H_a2: The source of financial education is related to the frequency of use of AFS.

RQ3: To what extent, if any, is the source of financial education related to the self-rating of financial knowledge?

$H_0$3: The source of financial education is not related to the self-rating of financial knowledge.

H_a3: The source of financial education is related to the self-rating of financial knowledge.

Theoretical Foundation

Two behavior theories served as the theoretical framework for this study. First, the theory of planned behavior (TPB) that Ajzen developed predicted the intention of an individual to engage in a specific behavior at a specific time and place. The behavioral

intention of the individual represents an outcome of the individual's attitude towards behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). Several studies have applied the TPB in the fields of financial services, debt management, consumer behavior in e-commerce, and financial behaviors of college students regarding cash and credit management (Xiao, 2008). The purpose of this theory is to understand and predict consumer behavior, and thus, this theory is appropriate for studying the effects of financial education on the use of AFSs. According to the TPB, financial education is a robust predictor of debt, and at the same time, it is amenable to change. Xiao et al. (2014) argued that a lack of quality financial education is a significant predictor of an individual's amount of debt. The TPB represents a method to predict individuals regardless of their situation, as well as design interventions that can help people avoid unhealthy behavior or to curb risk.

The transtheoretical model of behavior change (TTM), which Prochaska, DiClemente, and Norcross developed, included constructs from other theories to develop a process of intentional change in behavior. The TTM consists of five stages: precontemplation, contemplation, preparation, action, and maintenance. For every stage, there are specific change strategies change tactics. Scholars have applied the TTM to many studies in the fields of financial behavior, financial education programs, and credit counseling (Xiao, 2008). The theory can help individuals modify undesirable characteristics, such as an overreliance on AFSs, helping them eliminate undesirable debts. The TTM describes that personal behavior changes, like decreasing debts, take place in stages (Xiao, 2008). The theory provides an essential framework for establishing

and developing an approach that can assess readiness to avoid using AFS using financial education about debt to succeed (Xiao, Ahn, Serido, & Shim, 2014). Understanding the combination of financial knowledge, engagement in specific financial behaviors, and possible interventions that could transform undesirable financial behaviors to positive behaviors should contribute toward more careful, critical, and informed decision-making processes regarding the use and frequency of use of AFS. The researcher provided a more detailed explanation of the theoretical foundation of this study in Chapter 2.

Nature of the Study

The proposed study followed a quantitative methodology with a correlational approach. The quantitative methodology is appropriate for this study because the postpositivist worldview of the researcher leads to quantitative research, due to the philosophy of anticipating cause-effect relationships. Additionally, a researcher in quantitative research attempts to assess how the differences in one variable are associated with the differences in another variable (Curtis, Comiskey, & Dempsey, 2016). The explanatory correlational design is appropriate for the proposed study because it describes and measures the association or relationship between variables or sets of scores without controlling or manipulating the variables (Özkal, 2018; Curtis et al., 2016). The independent variables were sources of financial education, and the dependent variables were the use and frequency of use of AFS and the self-rated financial knowledge.

The researcher conducted statistical analyses based on numerical data assessed from the 2015 National Financial Capability Study. The dataset used for the study is from the NFCS, which is a national study that covered 27,564 American adults,

averaging 500 individuals per state, except for larger states such as New York, Texas, Illinois, and California, in which there were oversamples of 1,000 (FINRA, 2016). The NFCS was representative of the national population according to census distributions (FINRA, 2016). The data collection procedures are discussed explicitly in Chapter 3 of this study. The researcher conducted all the inferential analysis at the 95% level of confidence, with an alpha of .05.

The researcher analyzed secondary archival data using binary logistic regression for RQ1, Poisson regression and negative binomial regression analyses for RQ2, and one-way ANOVA for RQ3. The 2015 NFCS database contains questions that ask respondents whether they had received financial education and the venues at which they received it. Also, the respondents answered if they learned how to manage finances from their parents. Further, the respondents answered questions about whether they had used AFS in the past five years and the frequency at which they obtained the AFS.

Definitions

In this section, the researcher provides definitions of the independent and dependent variables and all relevant terms that appear in this study. The purpose of this section is to define terms that might have multiple and unclear meanings.

Alternative Financial Services (AFSs): AFSs refer to financial services offered by providers that are different from traditional federally insured banks (Bradley, Burhouse, Gratton, & Miller, 2009). AFSs include high-cost borrowing vehicles, such as payday loans, auto-title loans, pawnshop loans, and rent-to-own stores (Birkenmaier & Fu, 2016b; Cui, 2017).

Auto-title loans: Auto-title loans are loans where the consumer is using their car title to borrow money (FINRA, 2016). The annual percentage range of auto-title loans is up to 300%.

Financial education: There is a lack of universal definition regarding financial education. Delgadillo (2014) defined financial education as an "educational process by which one achieves financial knowledge and skills" (p. 25).

Financial literacy: Just as with financial education, there is no universal definition regarding financial literacy, financial literacy education, or financial education (Huston, 2010). Financial literacy refers to the ability of an individual to understand and use information that is related to finance (Huston, 2010). Financial literacy education and financial education were used interchangeably in the literature (Delgadillo, 2014; Sukumaran, 2015).

Objective financial knowledge: Objective financial knowledge is an accurate assessment of an individual's financial accuracy (Lee et al., 2017).

Payday Loans: Payday loans are high-cost short-term loans (O'Neill & Xiao, 2015). To obtain a payday loan, a consumer must write a postdated check for the principal plus the interest charged (Carter, 2015). Some payday lenders were found to charge up to 300% annual percentage rates (Harvey, 2019), and others up to 650% annual percentage rate (Carter, 2015).

Pawnshop loans: To obtain a pawnshop loan, the consumer must leave some item of value as collateral (Carter, 2015; Harvey, 2019;). The annual percentage rate of pawnshop loans could reach 300% (Harvey, 2019).

Rent-to-own stores: Rent-to-own stores provide financial arrangements in which the consumers buy a product, which is the collateral, and the annual percentage rate of such an arrangement might reach as high as 230% (Harvey, 2019).

Subjective (Perceived) financial knowledge: Subjective (Perceived) financial knowledge represents the perception of consumers' self-knowledge and contributes to an individual's self-confidence in information processing and decision-making (Lee et al., 2017).

Assumptions

The researcher made numerous assumptions in this study regarding sources of financial education and the frequency at which consumers used AFSs. The researcher assumed that respondents understood the questions regarding receiving and participating in financial education and the use and frequency of use of AFS, and responses were honest and truthful. The archival dataset used in the study was collected from the NFCS, which is a national study that was representative of the national population according to census distributions (FINRA, 2016). Analysis of a nationally representative archival data led to the assumption that this study will be generalizable to the United States population. The use of NFCS data has proven reliable and valid in other studies in the field of finance.

Scope and Delimitations

The specific focus of the research was to assess the relationship, if any, between sources of financial education and the use and frequency of use of AFSs. In this study, the researcher considered a relationship between sources of financial education and the

use of AFSs. This study relied entirely on the data collected for the NFSC, which was validated through numerous other studies. The sample for this study included respondents who participated in financial education in high school, college, the workplace, military, or who received financial education from their parents/guardians. The sample included only respondents who responded to the AFS questions regarding if they used AFS and how many times. The researcher excluded any candidate who did not meet these criteria.

The researchers from the FINRA Foundation collected data for the NFCS using a nonprobability quota sampling (Mottola & Kieffer, 2017), raising the question about the generalizability of the study. However, quota sampling addresses representativeness by selecting a sample with prespecified characteristics, with same characteristics distribution among the studied population (Babbie, 2017), which was the case with the data from NFCS. This study assessed the relationship between sources of financial education and the frequency of use of AFS. Exposure to financial education was used instead of the effectiveness or the type of financial education respondents received. Measuring the effectiveness of financial education was not feasible.

Limitations

There are limitations to this study. One limitation of this study involves the types of possible answers that the researcher provided the respondents. Specifically, respondents could choose the number of times they used AFS, but the largest number is four or more times. The data might have been of higher quality if respondents were allowed to enter their responses. Another limitation of this study involves sources of financial education. This study does not assess the effectiveness or type of financial

education respondents received. The researcher only analyzed sources of financial education and the participation of respondents.

The third limitation of this study involves the research design. This study uses a nonexperimental explanatory correlational design. The correlational design identifies an association between two or more variables and is most commonly used for archival data from governmental databases on a national level (Omair, 2015). Establishing an association between variables is the first criterion of causality (Creswell, 2019; Babbie, 2017; Omair, 2015); however, the prediction correlational design is not appropriate for this study because the researcher conducted no treatment or manipulation of variables. Finally, another limitation was the sample for the study. The researchers of the 2015 state-by-state survey collected data using nonprobability quota sampling (Mottola & Kieffer, 2017). Quota sampling addresses representativeness by involving a selected sample with prespecified characteristics, with same characteristics distribution among the studied population (Babbie, 2017), which was the case with the data from NFCS.

Significance of the Study

Numerous studies examined the AFS industry and its effects on consumers (Birkenmaier & Fu, 2016b; Horowitz, 2017; Harvey, 2019). Many researchers have studied the effects of financial education on consumer behavior as well (Cornwell and Murphy, 2016; Lee et al., 2017; Xiao & Porto, 2017). There is a gap in the literature regarding the effects of various sources of financial education on the use and frequency of use of AFSs. It is the purpose of this study to fill the identified gap in the literature by contributing to the existing body of knowledge about the relationship between these

critical aspects. Understanding if and to what extent sources of financial education relate to the use and frequency of use of AFS may lead to a better understanding about which source of financial knowledge deters consumers from unhealthy and high-cost borrowings. Despite the harm that consumers suffer from the predatory lending practices of the AFS industry, U.S. consumers continue to use them with high frequency (Horowitz, 2017; Lin et al., 2016).

Significance to Theory

This study may contribute to the field of personal finance. Assessing the relationship between financial education and the use of AFS might serve as a basis for future experimental research using the TPB and TTM by conducting an intervention that would focus on consumers' planning and budgeting and contribute to the avoidance of unhealthy behaviors. Since the quantitative methodology is used, the study also corroborated the validity of theoretical models.

Significance to Practice

This study might contribute to the knowledge about financial education in the U.S. by exploring the effectiveness of sources of financial education on specific borrowing behaviors. It is also expected that the study will reveal new trends involving predatory credit institutions. This study may fill a gap in the existing literature by examining whether sources of financial knowledge obtained at an institution such as high school, college, workplace, military, or from parents/guardians relates to the financial behaviors of U.S. consumers regarding their use of AFSs. Harvey (2019) identified a relationship between mandated high school financial education and the use of AFS, but

the study did not address the financial knowledge received in other venues, such as high school, college, workplace, the military, or from parents/guardians.

Further, this study might provide the basis for further research on the specific types of financial education American consumers receive and lead to an experimental design that would measure the extent of the effects of financial education on the use of high-cost borrowing vehicles. Finally, this study might improve the relationship between consumers and financial advisers by lowering the anxiety of consumers.

Significance to Social Change

Understanding if and to what extent sources of financial knowledge are related to the use and frequency of use of AFS may lead to positive social change by understanding how and if sources of financial knowledge deter consumers from unhealthy and high-cost borrowings. This information should inform policymakers about the steps needed to remedy the problem of continuous AFS usage. Decreased use of AFSs may contribute to improved emotional and physical health (Eisenberg-Guyot et al., 2018; Sweet et al., 2018) and improved welfare (Lim et al., 2014). Willis (2017) suggested that creating financially-informed citizens through financial education can influence economic and financial policies. This study might contribute to creating financially-capable and informed citizens by identifying how diverse sources of financial knowledge deter the use and frequency of use of AFSs.

Summary and Transition

In this chapter, the researcher provided the introduction to the study, which described the use of AFSs and the importance of financial education. Further, the

researcher briefly presented the background of the study, explaining the harmful effects of AFSs and the positive outcomes of financial education. The researcher will explain these variables in greater detail in Chapter 2. Additionally, the researcher presented the statement of the problem, which explained the general and specific problems addressed in the study. The researcher also presented the purpose of the study, research questions, and hypotheses, as well as the nature of the study. The researcher provided definitions of terms used in this study that might have multiple meanings or are uncommon or unclear. Finally, the researcher identified the assumptions, scope, delimitations, and limitations of the study, as well as the significance of this study to theory, practice, and positive social change.

Chapter 2: Literature Review

The general problem in this study is that many consumers are harmed by the predatory lending practices of the AFS industry. Lin et al. (2016) reported that despite the detrimental effects of AFSs on U.S. consumers, they continue to use these services with high interest rates and substantial fees associated with their use. Consumers' use of these services results in poor emotional and physical health (Eisenberg-Guyot et al., 2018; Sweet et al., 2018), deteriorated welfare, such as increased difficulty in paying bills, increased likelihood of Chapter 13 bankruptcy, bank account closures, and decreased property values (Lim et al., 2014; Melzer, 2011). The researcher specifically addressed how consumers' sources of financial education drive their financial behavior. Harvey (2019) suggested that different sources of financial education may have inadequately prepared consumers to make effective financial decisions.

The purpose of this study is to examine if and to what extent sources of financial education affect the use and frequency of use of AFS among U.S. consumers. Efficient and effective fiscal management and financial behavior require skills that consumers can attain through formal financial or parental education or parents educating their children on how to manage their finances (Kadlec, 2015; Kim et al., 2017; Tang, 2017; Tang & Peter, 2015; Van Campenhout, 2015; Widayati, 2015). Previous studies have demonstrated that financial education can improve many financial behaviors and the financial decision-making practices of individuals. However, few studies have tested how sources of financial education relate to the use and frequency of use of AFSs.

Literature Search Strategy

The researcher used multiple library databases for this study. The Walden Library was the primary library that the researcher used to search and review the literature regarding the study. The researcher used the Thoreau search tool extensively because it provided a comprehensive search through multiple databases. Additionally, the researcher used EBSCOHost, ERIC, and Google Scholar. Further, the researcher searched journals pertaining to the topic and used the FINRA Foundation website because it provided journal articles and research papers that used FINRA archival data. Finally, when an article was not available through those sources, the researcher used Google to locate the original publishing source and access those articles.

Key search terms the researcher used included: *AFSs*, *fringe loans*, *payday loans*, *pawnshop stores*, *auto-title loans*, *rent-to-own stores*, *self-reported financial knowledge*, *subjective financial knowledge*, *financial education*, *financial literacy*, *financial capability*, *financial education programs*, *financial education in high school*, *financial education in college*, *financial education at the workplace*, *financial education in military*, and *financial education by parents*. The researcher also searched with various combinations of those terms. Many studies used financial education, financial literacy, and financial capability interchangeably, posing some limitations on the search strategy.

The literature search focused on literature published between the years 2013 and 2019. The researcher also considered literature older than 2013 when it provided usefulness to the study. The researcher included seminal studies to explain the theoretical foundation of the study, which was built around two behavior theories: the TPB and

TTM. All journal articles included in this study were peer-reviewed journal articles. The primary source of archival data was the FINRA Foundation's NFCS, which is available on their website.

Theoretical Foundation

In this section, the researcher discusses in more detail the theoretical foundations that support the factors affecting financial knowledge, financial behavior, and the importance of financial education in research planning. The researcher has built the theoretical framework for this study around two behavior theories: the TPB and TTM.

The TPB predicts the intention of an individual to engage in a specific behavior at a specific time and place. The behavior intention of the individual represented an outcome of the individual's attitudes towards behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). Many studies applied the TPB in terms of financial services, debt management, consumer behavior in e-commerce, and financial behaviors of college students regarding cash and credit management (Xiao, 2008). Serido et al. (2015) applied TPB to explore the influences of parents' financial behaviors on their children's financial attitudes. In another study, Habibah, Hassan, and Iqbal (2018) used the TPB to test the theory's factors about the mental budgeting behavior of households.

Kimiyaghalam, Mansori, Safari, and Yap (2017) applied TPB to assess the relationship between the financial behavior of parents and the retirement planning of their children and found parents' role to be a significant influence on the children's retirement planning behavior. Further, Koropp, Grichnik, Kellermanns, and Stanley (2013) adapted the TPB in their study in which they assessed the relationship between choices in family

firms and family norms, attitude, perceived behavioral control, and behavioral intentions. Koropp et al. (2013) found family commitment to be a moderator of the relationships between financial knowledge positive experience with debt suppliers, as well as financial attitudes of managers towards debt.

The purpose of this theory is to understand and predict consumer behavior, which makes it appropriate for studying the effects of financial education on the use of AFSs. According to the theory, financial education is a robust predictor of debt, and at the same time, it is amenable to change. Xiao et al. (2014) argued that the lack of a quality financial education is a significant predictor of the amount of debt one has. The lack of financial education and socioeconomic factors are the reasons for the popularity of AFSs in the United States. College and high school curricula are now embracing financial literacy programs, and many organizations are currently working with students in different colleges to ensure that they are financially savvy. The TPB represents a method to predict the behavior of human beings, regardless of the situation, as well as design interventions which can help people avoid unhealthy behaviors or curb risk.

The TTM that Prochaska et al. developed included constructs from other theories to develop a process to explain intentional changes in behavior. The TTM consists of five stages: precontemplation, contemplation, preparation, action, and maintenance (Prochaska et al., 1992). For every stage, there are specific change strategies and tactics. The purpose of the theory is to help people develop healthy behaviors or stop unhealthy behaviors. The theory can help individuals modify undesirable characteristics such as an overreliance on AFSs. The TTM purports that personal behavior changes, like

decreasing debts, take place in stages (Xiao, 2008). Smith, Richards, and Shelton (2016) confirmed the applicability of TTM in interventions for financial education and explained that consumers should be taught when they are ready, and teaching techniques should revolve around simplicity. Leandro-França, Van Solingeb, Henkens, & Murta (2016) built on the TTM to assess the effectiveness of retirement planning programs and concluded that extensive programs were more effective than short programs regarding the progress through the TTM stages.

Additionally, Salerno, Berriche, Crié, and Martin (2015) used the TTM as a basis for developing strategies for changing consumers' behavior. A proper understanding of this theory is essential when undertaking financial education programs, as the application of the principles of this theory will improve financial habits among people. According to the theory, officials should structure financial education programs in such a way to recognize the level of an individual's readiness for change. The theory provides an essential framework for establishing and developing a measure that can assess readiness to avoid using AFSs, and thus make successful decisions regarding financial education and debt (Xiao et al., 2014). This study examined whether sources of financial education, obtained in a formal educational settings or from parents/guardians, affect the financial behaviors of individuals regarding the use and frequency of use of AFSs. Understanding the combination of financial education, engagement in specific financial behaviors, and possible interventions that could transform undesirable to positive financial behaviors should contribute toward more careful, critical, and informed decision-making processes regarding the use and frequency of use of AFSs.

Literature Review

Alternative Financial Services

AFSs are financial instruments offered in lieu of loans that traditional banks and credit unions provide; they include payday loans, auto-title loans, pawn shops, and rent-to-own stores (Hundley, Wilson, & Chenault, 2018; Cui, 2017). The increased number of AFSs in the U.S. concerns because of the increased risk of consumers' financial health (Friedline & Kepple, 2017). These AFSs have high-interest rates and substantial fees associated with their use, which becomes problematic if the consumer is unable to repay the loan by the due date. In those cases, the loans roll over, and the AFSs impose additional fees, making the amount of money owed significantly more substantial than the amount borrowed in a short period (O'Neill & Xiao, 2015). In 2016 alone, underserved consumers spent approximately $173 billion on fees and interest (Center for Financial Services Innovation, 2017).

The financial products categories include: single payment credit (overdraft fees, pawn shops, storefront payday loans, online payday loans, and refund anticipation checks), short-term credit (retail credit cards, subprime credit cards, installment loans, rent-to-own arrangements, auto-title loans, nonbank small business loans, and secured credit cards), long-term credit (subprime auto loans and private students loans), and payments and deposit accounts (checking and savings accounts, check cashing, money transfers, etc.). The most significant increase in 2017, as compared to 2016, was noted in the increase of 23.5% of short-term credit fees and interest (Center for Financial Services

Innovation, 2017). The comparison in costs and fees of traditional credit and AFSs is presented in Table 1.

Table 1

Rates, Fees, Costs, and Market Share of Spending of Underserved Consumers

Product	Average Rate/Fee per Use	APR	Term of Loan	Collateral	Market Share
Retail Credit Card	23.8%	23.8%	Revolving	None	$33.2B
Overdraft	$29.73 each	Up to 2,756%	14 days	None	$24.5B
Pawn Shop	5-30% of loan value	Up to 365%	30 days	Physical item	$8.1B
Rent-to-own	59.2% of item market value	Up to 230%	1-2 years	Product bought	$2.8B
Payday	15-25% of loan value	Up to 1,950%	14 days	Paycheck	$6B
Auto-Title Loan	25% of loan value	326%	28 days	Vehicle	$3.9B

Note. From "Impact of financial education mandates on younger consumers' use of alternative financial services," by M. Harvey, 2009, *Journal of Consumer Affairs*, 1-66. doi:10.1111/joca.12242

There is an emerging problem in the United States regarding access and use of credit (Colarusso, 2017). The extensive use of AFSs in the United States is the direct result of limited access to credit and lack of financial knowledge (Friedline & Kepple, 2017). The users of AFSs are choosing the route of high-cost borrowing due to the lack of access to traditional credit financing options that traditional financial institutions provide (Colarusso, 2017; Servon, 2017). Lusardi and Scheresberg (2013) indicated that the shocks from the 2009 financial crisis were not the only reason, but the high level of financial illiteracy contributed to the use of AFSs. The Great Recession from 2008 to

2010 had a minimal effect on the use of payday loans during the recession, but there was an increase in the use of payday loans after the recession (Agarwal et al., 2016). The increased use of payday loans after the recession might be due to the contraction of credit that traditional financial institutions extended to consumers immediately after the Credit Card Accountability Responsibility and Disclosure Act of 2009 (Friedline & Kepple, 2017; Servon, 2017).

Additionally, the limited access to, or exhaustion of, traditional credit caused consumers to seek AFSs (Bhutta, Skiba, & Tobacman, 2015). Colarusso (2017) confirmed that the increased use of AFSs was due to the lack of access to credit in traditional financial institutions. Another explanation for the increased use of AFSs was the objective and subjective financial knowledge of consumers. The combination of a lower objective financial knowledge and overconfidence in self-assessed financial knowledge resulted in significantly higher usage of alternative financial instruments (Robb, Babiarz, Woodyard, & Seay, 2015). As a result, overconfidence in the self-assessment of financial knowledge should be concerning. Porto and Xiao (2016) found that over 11% of consumers displayed overconfidence in their financial literacy levels and were less likely to seek professional advice. Also, minority groups and individuals with lower levels of financial knowledge were also less likely to seek professional financial advice (Gerrans & Hershey, 2017). Brown et al. (2016) came to similar conclusions, indicating that mathematics and financial education represented predictors of a decreased reliance on debt and improve repayment behavior, whereas economics education showed an increased likelihood of outstanding debt and repayment difficulties.

Users of Alternative Financial Services

Harvey (2019) said that about 25% of Americans use AFSs. The consumers associated with the use of AFSs often have lower financial knowledge and education, lower income individuals, and are unbanked (Birkenmaier & Fu, 2016a). Birkenmaier and Fu (2016a) identified young adults with a low level of financial literacy as frequent users of AFSs, though they also identified a general demand for AFSs among many U.S. consumers (Birkenmaier & Fu, 2016a). Harvey (2019) came to a similar conclusion about the users of AFS, although she also suggested that females and older consumers were significantly less likely to use AFS compares to individuals responsible for multiple children. Further, the consumers who use one type of AFS were found to be more likely to use other types as well. For example, consumers who lived in states that allowed rollovers of payday loans were more likely to use pawnshops at the same time (Carter, 2015).

The payday lending industry explicitly targets this vulnerable population through marketing and positioning most of the stores in the geographical areas where AFSs represent the only source of credit for specific groups of the general population (Barth et al., 2016). As of 2010, Melzer and Morgan (2015) reported that there were approximately 20,000 payday stores nationwide. The traditional banking sector was found to serve wealthier individuals, whereas the AFS sector was satisfying the credit needs of lower-income individuals (Fowler, Cover, & Kleit, 2014). The demographic characteristics of the population (along with consumers' creditworthiness, and regulations related to AFS) was the key determinant for the locations of the AFSs (Prager, 2014).

Although pawnshop stores avoided positioning in locations where the regulations were restrictive regarding the interest and fees that could be charged, payday lenders and check cashers were not found to respond to such regulations (Fowler et al., 2014). Barth et al. (2015) also found a positive relationship between the number of payday stores to the percentage of African American population, population aged 15 and under, and the poverty rate. Dunham, Foster, Graves, and Masucci (2018) also found that the sociodemographic characteristics of the population (median income, race, and ethnicity) were key determinants of the geographical location of AFSs.

Effects of Using AFS

Scholarly views on the effects of AFSs on American consumers are somewhat conflicting. Lim et al. (2014) described the positive effects of payday lending, as it could improve some outcomes such as food consumption and subjective well-being. Lim et al. also presented the adverse effects of payday lending, which included deteriorating consumers' welfare, decreased likelihood of paying bills, Chapter 13 bankruptcy, bank account closures, and a decrease in property values. In many cases, however, these high-cost borrowing vehicles are necessary to make ends meet. It is worth noting that payday loans help some households avoid food insecurity (Fitzpatrick & Coleman-Jensen, 2014). Parents with volatile incomes often face food hardships, which results in borrowing from family, from friends, and from AFSs (Bartfeld & Collins, 2017). Also, Fitzpatrick (2017) confirmed that unbanked households and households using AFSs were more likely to experience food insecurity as compared to other households. The situation implies a

vicious cycle of income volatility that necessitates the use of AFSs, that provides immediate solutions but ultimately leads to further income volatility.

In scholarly literature, AFSs represent high-cost borrowing vehicles often connected to predatory practices. Melzer (2011) argued that these services did not alleviate economic hardships and only led to difficulty in paying other financial obligations. It is salient to note that the effects of AFSs expand well beyond the financial effects and economic well-being of the consumer. Eisenberg-Guyot et al. (2018) investigated the relationship between the use of AFSs and self-rated health, associating that the use of AFSs with a higher prevalence of poor health. Specifically, the consumers that used AFSs reported higher rates of adverse health effects, including higher body mass index and self-reported symptoms of poor physical health and anxiety (Sweet et al., 2018).

Regulation of AFS

Some researchers have called for law reform or even a ban on the payday lending industry because of their predatory lending practices and its harmful effects on consumers. Others have argued that such restrictions might prove detrimental to the population who uses, and in many ways, relies on these high-cost borrowing vehicles (Horowitz, 2017; Friedline & Kepple, 2017). Horowitz (2017) noted that a reform of the payday lending industry in Colorado in 2010 eliminated the harmful effects of payday lending, while also avoiding the reduction of access to credit. The new rules on the payday lending industry, which the Consumer Financial Protection Bureau (CFPB) proposed, attempted to motivate consumers to pay off a loan faster (Payroll Manager's

Letter, 2017). Others have argued that states already have programs that help with food, utilities, and housing, so such reform is not necessary (Lara, 2018). For example, many payday customers in southern Alabama were satisfied with the payday lending experience and did not support further regulation of the AFS industry (Bronson & Smith, 2017). It is salient to note that specifically auto-title loans and rent-to-own stores lack state regulation (Harvey, 2019; Martin & Adams, 2012).

State regulation prohibiting payday lenders has proven beneficial in protecting modest and highest-income individuals, but it did little for the lowest-income consumers (Friedline & Kepple, 2017). The new regulation that the CFPB proposed would make a compliance burden for federal credit unions who provide short-term loans like those of payday lenders, possibly pushing them out of the market and limiting the credit options to the vulnerable population even more (Nicholas, 2017). Although many payday lending practices seem predatory and harmful, and they often are, some consumers need these AFSs to make ends meet. Therefore, further regulations or an outright ban of AFSs may harm the very people they are meant to protect. One possible solution is to return to competitive payday lending (Lawrence & Elliehausen, 2008), and focus on creating financially informed citizens through financial education. These changes can influence economic and financial policies and regulations (Willis, 2017).

The adverse effects of AFSs on the vulnerable population are evident. It is also evident why the underserved population chooses AFSs, especially after considering the lack of access to traditional financial services and the lack of financial education to compare credit alternatives. Although expensive, AFSs provide the vulnerable

population with much-needed access to credit (Servon, 2017). While strict regulations of the AFS industry provides some benefits (Horowitz, 2017), it often means further restriction of access to credit to those who need it the most (Horowitz, 2017; Friedline & Kepple, 2017). The traditional financial institutions' offering of financial products usually applies to a specific population, while underserves the vulnerable population (Colarusso, 2017).

Traditional Financial Services

The banking sector for traditional financial services includes federally insured, traditional banks and credit unions (Fowler et al., 2014). The financial services in the traditional banking sector that consumers most commonly use include: checking accounts, savings accounts, mortgage loans, and revolving credit (Cruijsen & Diepstraten, 2017). In addition to the most commonly used services, traditional financial institutions offer services such as underwriting securities, managing mutual funds, and broker services (Chami, Fullenkamp, Cosimano, & Rochon, 2017). Many economically vulnerable Americans do not have checking accounts or revolving credit from traditional banks due to their credit history, which often leads them to pay high fees to cash a check or to obtain a short-term loan from the AFSs industry (Colarusso, 2017).

The less educated consumers show lower satisfaction with traditional credit services and are less likely to submit a complaint after experiencing a problem with a financial product (Clifton, Fernández-Gutiérrez, & García-Olalla, 2017). Further, the traditional financial services industry primarily serves wealthier individuals, which leaves a gap in the industry for the underserved low-income population (Fowler et al., 2014).

Servon (2017) argued that traditional financial institutions have failed to serve millions of Americans, which resulted in consumers using the only financial products available to them. Additionally, she suggested three factors that contributed to the growth of the AFS industry: contraction of credit by traditional financial institutions, changes in the banking industry by charging exorbitant amounts in overdraft fees, and the macrotrends of financial insecurity (Servon, 2017).

Traditional versus Alternative Financial Services

Revolving credit is a consumer credit that traditional financial institutions issue, with a specific limit that the consumer can access when needed (Lukas, 2018). In many ways, the revolving credit of traditional financial institutions most closely resembles the short-term loans that the alternative financial industry issues. The revolving credit issued in the traditional financial services sector is usually uncollateralized (Lukas, 2018) and the annual percentage interest rates vary between 13% and 30% (Harvey, 2019). Federal credit unions offer short-term loans that resemble AFS loans and are a much better alternative than AFS loans (Nicholas, 2017). Traditional financial institutions, such as banks and credit unions, provide an overdraft credit for consumers who have overdrawn their deposits, resulting in $23 billion in overdraft lending revenues in 2007 (Melzer & Morgan, 2015).

As opposed to traditional institutions, in 2007, the AFSs charged interest in the amount between $8 and $9 billion (Melzer & Morgan, 2015). Whereas traditional financial institutions provide unsecured revolving credit with an annual percentage rate between 13% and 30%, payday loans carry up to 1,950% annual percentage rates

(Harvey, 2019). The overdraft fees charged by traditional financial institutions are very similar to AFSs because the annual percentage rate can be up to 5,000% for some banks (Servon, 2017). However, overdraft fees are not credit, and many banks offer overdraft protection services. The credit in traditional financial institutions that resembles AFS loans is the revolving credit of unsecured credit cards.

The location of the traditional banking sector seems to follow and serve upper-income communities that are predominantly White, leaving low-income consumers (identified as minorities and immigrants) underserved (Fowler et al., 2014). Also, standardized practices have restructured the traditional financial industry, resulting in a decrease of local ownership in rural counties, enabling the emergence of AFSs in those regions (Tolbert, Mencken, Riggs, & Li, 2014). Colarusso (2017) emphasized the need for better regulation of traditional financial institutions to help vulnerable consumers in need. The CFPB will impose a new rule on short-term lending in 2019, restricting the amounts of loans that lenders can give out to consumers and the rules that must be met by the consumer to qualify for an extension (Payroll Manager's Letter, 2017). The new CFPB rules could force payday lenders to restructure their financial products; however, the compliance requirement could prove costly for federal credit unions as well, forcing them out of the short-term loans market completely and decreasing the credit alternatives for the unbanked and users of short-term loans (Nicholas, 2017).

Challenges for Traditional Financial Services Industry

Traditional financial institutions struggle to retain their customers because consumers leave their banks whenever they are dissatisfied with their primary banking

channels or distrust the bank (Kabadayi, 2016). Wales (2015) documented consumers' distrust of the traditional banking industry, especially with the scandals that eroded the banks' reputation after the 2008 financial crisis. Wales further argued that an increasing number of consumers were becoming unbanked after leaving traditional financial institutions. The growth of technological online financial products has also threatened traditional financial institutions (Königsheim, Lukas, & Nöth, 2017). Wales discussed the importance of technology in financial products (crowdfunding, peer-to-peer lending, cryptocurrency) that would enable more consumers to access financial services.

The digitalization of financial services might not improve consumers' access to financial services because the financially illiterate and risk-averse consumers continue to prefer personal interaction when obtaining financial products (Königsheim et al., 2017). Lusardi and Tufano (2015) suggested that individuals with lower financial knowledge tend to engage in high-cost credit card behaviors, such as finance charges, paying monthly installments late, using cash advances, and repaying only the minimum monthly payment. Finally, the individuals with lower financial knowledge were found to be responsible for 21% of the high-cost charges on credit cards, making the cost of ignorance significant (Lusardi & Tufano, 2015). An increased income, consumption, and income shocks usually result in an increased demand for financial products (Druedahl & Jorgensen, 2018; Negro et al., 2014). The consumers' choice of whether to use traditional or AFSs ultimately depends on their credit history and whether they are banked or unbanked (Colarusso, 2017), as well as the level of financial knowledge they possess (Lusardi & Tufano, 2015).

Self-Assessed (Subjective) Financial Knowledge

Subjective financial knowledge describes individuals' perceptions of their understanding of finances (Xiao et al., 2014). Although objective financial knowledge is an accurate assessment of an individual's financial accuracy, subjective financial knowledge represents the perception of self-knowledge and contributes to an individual's self-confidence in information processing and decision-making (Lee et al., 2017). Subjective financial literacy levels are just as crucial for financial behaviors as the objective financial literacy levels (Allgood & Walstad, 2016). A higher level of financial knowledge, whether subjective or objective, represents an indicator of positive financial behavior (Woodyard et al., 2017).

Subjective financial knowledge, the feeling of self-mastery, and lower anxiety regarding finances contribute to better financial behaviors (Carlson, Britt, Goff, & Archuleta, 2015). Financial confidence is critical to financial literacy, but overconfidence might lead to risky financial behaviors (Woodyard et al., 2017; Tokar Asaad, 2015). Lee et al. (2017) noted the lack of definition and measure of objective financial knowledge in the scholarly literature and argued that the miscalibration of self-evaluated financial knowledge might result in consumers inability to process disclosure information effectively. Subjective financial knowledge was also found to decrease risky paying behaviors (Xiao et al., 2014).

Further, subjective financial knowledge mediates between financial education and financial satisfaction (Xiao & Porto, 2017). Gill and Bhattacharya (2017) found that subjective financial knowledge, in addition to objective financial knowledge, contributed

to favorable financial outcomes. Self-esteem and subjective financial knowledge can result in positive financial behavior, and Tang and Baker (2016) argued that financial education programs should also focus on these socio-psychological variables. Financial education contributed to better performance in objective and subjective financial literacy, desirable financial behavior, perceived financial capability, and financial capability index (Xiao & O'Neill, 2016).

Financial Education versus Financial Literacy

There is a lack of universal definitions of financial education and financial literacy. Delgadillo (2014) defined financial education as an "educational process by which one achieves financial knowledge and skills" (p. 25). Huston (2010) defined financial literacy as "measuring how well an individual can understand and use personal finance-related information" (p. 306). Financial education is seen as an input that increases the human capital (financial knowledge and application) of an individual (Huston, 2010). Willis (2017) argued that financial literacy is neither necessary nor enough to improve the well-being of individuals and society. Instead, the goal should be a financial education that fosters finance-informed citizens with the capacity for civic engagement to influence economic policies and financial regulation (Willis, 2017). A standalone money management course in high school, which was aimed to improve the financial literacy of students, did not improve financial literacy (Farinella, Bland, & Franco, 2017). Instead, Farinella et al. (2017) suggested that an improvement in financial behaviors occurred when students learned money management skills as part of another course.

Additionally, the benefits of financial education included facilitating knowledge acquisition, improving confidence in one's knowledge and abilities, and encouraging individuals to take action (Xiao & Porto, 2017). Besides the lack of a universal definition of financial education and financial literacy education, the common themes are financial knowledge and skills (Delgadillo, 2014). Financial education, personal financial experience, and parents' financial experiences present the major sources that significantly improve financial knowledge acquisition (Tang & Peter, 2015). Objective financial knowledge relates to savings and possessing an investment account, while self-reported financial knowledge relates to favorable financial outcomes (Gill & Bhattacharya, 2017).

Financial Education and Its Effects

Generally, the sources of financial education are formal in nature: obtained in high school, at college, at the workplace, in the military, or informal, taught by parents/guardians. These are the primary sources of financial education assessed in this study. There are also other sources, such as financial education provided by financial institutions, social workers, financial advisors, libraries, or other programs. These sources of financial education are rare and affect a few individuals. Financial education is essential, especially in the age of increasing student debt, complex financial choices, retirement planning, and mortgage lending choices (Geddes & Steen, 2016). Financial education and financial knowledge can provide consumers with many benefits. Prior financial education enabled consumers to process financial disclosures with high readability more accurately than individuals without prior financial education (Lee et al., 2017).

This study explored the role of financial education in averting consumers from predatory AFSs. Financial education could reduce impulsive decision-making (DeHart, Friedel, Lown, & Odum, 2016). Further, financial education could improve consumers' objective and subjective financial literacy, desirable financial behavior, perceived financial capability, and the financial capability index (Xiao & O'Neill, 2016). The source of financial knowledge might have a different effect on various financial behaviors, as the researcher discussed in the following sections. This study has a unique perspective as very few studies have explored and evaluated the different sources of financial education, and no studies have explored the effect different sources of financial education have on consumers' use of AFSs.

Financial Education Obtained in High school and College

Some of the sources of financial education take place at high schools and colleges across the United States. These two sources are critical because most of the population attends high school and college. According to the U.S. Census Bureau about 90% of the population age 25 and older completed high school (United States Census Bureau, 2018). Additionally, the students that enrolled in college immediately after the completion of high school was about 70% (National Center for Education Statistics, 2017). Some researchers questioned the quality of high school financial education. For example, Geddes and Steen (2016) argued that financial education offered in K-12 institutions might not be appropriate due to a lack of students' experiences, a lack of teachers' training, and a lack of appropriate prerequisites that should enable the students to grasp the concepts.

Some researchers have called on policymakers to modify the curricula to increase the willingness and capacity of educators to teach financial literacy (De Moor & Verschetze, 2017). However, researchers have also shown the overwhelmingly positive impact of high school financial education. Cornwell and Murphy (2016) investigated the effect of a mandated high school financial education on the economic well-being in Texas, finding improvement of consumer credit measures after the introduction of the financial education mandate. In a similar study, Pintye and Kiss (2016) documented the positive effect of high school financial education on financial literacy levels in Hungarian students.

Harvey (2019) indicated that financial education mandate in high school reduced the use of payday borrowing by 4%. In her study, Harvey (2019) assessed the relationship between mandated high school financial education and the use and frequency of use of payday loans and rent-to-own stores. The researcher in this study assessed the major sources of formal financial education (high school, college, military, and workplace) and informal financial education (parents/guardians), regardless of whether such education is mandatory or not. Harvey (2019) suggested that exposure to financial education results in lower usage of payday borrowing. The researcher of this study assessed the effectiveness of each source of financial education on the use and frequency of use of AFSs.

The financial education teaching delivery and approach should be carefully designed. A focused financial education intervention based on students' characteristics is more effective than one universal approach because there are significant differences

among groups in their financial behavior and attitudes based on gender, race, and college major (Peach & Yuan, 2017). Two different studies (Graves & Savage, 2015; Anderson & Card, 2015) also found differences in financial behaviors between males and females. As a result, Grohmann (2016) suggested that educators should teach females about financial matters from an early age to improve overall gender equality. Financial education intervention might have a positive effect on the students' perception of financial behavior (Anderson & Card, 2015). The readiness of students to learn about personal finances plays a significant role as well; Graves and Savage (2015) found that disadvantaged students who faced enduring and chronic disadvantage did not have the opportunity to apply what they learned about finances, as opposed to students who only experienced a short-term disadvantage.

The interest of college students in financial education largely depends on the anticipated return, time cost, financial independence, and gender (Harrington & Smith, 2016). Unfortunately, many institutions of higher education do not prioritize financial education as part of their curriculum (Geddes & Steen, 2016). Thus, creating an effective curriculum that may attract students to attend classes and provide effective delivery of financial concepts focused on students' characteristics should ensure that students attain valuable, applicable skills. Dyer, Lambeth, and Martin (2016) compared traditional to interactive instruction of personal finance skills and noted no differences between test scores; however, they suggested that students in the interactive instruction group changed their attitudes positively and had higher levels of engagement with the course material.

Farinella et al. (2017) suggested that students were more willing to avoid debt when financial literacy was offered as a topic in another course, compared to a standalone money management course, in which no improvement was seen. While exposure to financial education might be beneficial in deterring consumers from AFSs (Harvey, 2019), it is salient to assess how different sources of financial education affect consumers' use and frequency of use of AFSs, which is the purpose of this study.

Financial Education Obtained at the Workplace

Financial education that an individual's employer provides can also prove useful. Positive results from a financial education can be expected when educators utilize culturally inclusive teaching methods (Vitt, 2014). Geddes and Steen (2016) discussed the possibility of a workplace financial education but also pointed out the disadvantages of such a program, such as a failure to follow standards, a lack of systematic financial education, and the fact that such programs were optional. The most effective methods of financial education at the workplace were personal consultation services, voluntary workshops, and online resources and courses (Mrkvicka, 2016). Financial education at the workplace should include more than just retirement planning, and focus on budgeting, debt management, and keeping an emergency fund (MacKenzie, 2017). The positive effects of financial education that an employer provides are numerous.

Prawitz and Cohart (2014) examined the effects of financial education on personal financial behaviors and found that participants who received financial education in the workplace were 1.8 times more likely to use a budget, 1.0 times more likely to assess asset allocation, and 1.6 times more likely to increase retirement contributions.

Other studies produced comparable results regarding increased retirement planning and saving behavior (Clark, Lusardi, & Mitchell, 2017; Collins & Urban, 2016). Financial education for employees benefits both the employer and the employee. Providing financial education by employers shows care for employees that can increase productivity, employee retention and engagement, enhanced recruitment, excellent retention, and stronger customer relationships (Bannon, Ford, & Meltzer, 2014; Vitt, 2014). The positive effects of financial education provided at the workplace are evident in the literature. There is a gap, however, about the effect of financial education offered at a workplace on the use of AFSs.

Financial Education in the Military

Many programs operate in the United States to provide veteran support regarding education, employment, social relationships, health, legal/financial/housing (Richardson, Morgan, Bleser, Aronson, & Perkins, 2019). Members of the U.S. military generally have low levels of financial knowledge and frequently use AFSs (Walstad et al., 2017). When compared to civilian households, military households showed more savings accounts, more problematic credit card behavior, and equivalent use of AFS (Skimmyhorn, 2016). Credit card debt and perceived net worth affect the subjective well-being of soldiers (Bell et al., 2014). Military personnel and college students show similarities and differences regarding their finances. Soldiers and college students with higher levels of subjective financial knowledge and lower anxiety about finances report better financial behaviors (Carlson et al., 2015).

Research on the effectiveness of financial education for the military remains limited (Walstad et al., 2017). The researcher in this study added to the literature by exploring how exposure to financial education provided in the military affects the use of AFSs by military members. Additionally, Skimmyhorn (2016) investigated the effects of a personal fiscal management course in the U.S. Army and concluded that it reduced the probability of having credit balances, delinquencies, and adverse legal actions for the first year since the course but had no long-term effects.

Financial Education Obtained by Parents

Consumers obtained financial education from informal sources as well, most notably, from parents or guardians. One of the predictors for the financial behavior of young adults was the background of their parents (Yong & Tan, 2017). Van Campenhout (2015) confirmed the positive role of parents in the financial socialization of their kids but pointed out the lack of parental involvement in the financial education programs. Kim et al. (2017) encouraged parents/guardians to invest early in the education of children and suggested that having a college-savings account for their kids would significantly improve the child development and setting higher expectations. Researchers agreed that financial education should start as early as possible (Kadlec, 2015; Cavanaugh, 2013).

Parents' financial experiences often positively impact the financial knowledge of young adults and can be a substitute for formal financial education (Tang & Peter, 2015). There is an intergenerational consistency in the financial behavior of parents and their children; the financial behaviors of parents both directly and indirectly affect the financial

behaviors of their children (Tang, 2017). Cavanaugh (2013) argued that financial education should be provided in public schools and not left entirely to parents/guardians because there was a possibility of financial inequality. Widayati (2015) suggested a direct or indirect effect of the socio-economic status of parents, family financial education, and learning financial education in universities on a child's financial behaviors.

Other Sources of Financial Education

Aside from the formal and informal sources of financial education discussed above, there are other efforts to provide valuable financial education to consumers. Caplan (2014) argued that programs on financial inclusion needed to improve their effectiveness and provided important implications to include social workers as part of the community response to predatory lending practices because social workers specifically work with vulnerable populations that are affected by the AFS predatory practices. Engagement of community mechanisms by social workers to increase the access to credit to vulnerable populations was a critical step towards alleviating poverty (Caplan, 2014). Other smaller efforts have been noted in improving financial knowledge.

Hayes (2012) presented various programs for financial literacy awareness; for instance, California State University-Fullerton introduced a grant to establish the U.S. Bank Economic Empowerment Program aimed at middle-schoolers to set up a special savings account for postsecondary education. Additionally, the United Negro College Fund has started an "Empower Me Tour," to encourage fiscal responsibility for local

university and community college students. Hayes (2012) also reported on several universities that established programs to address the importance of financial literacy.

Reams-Johnson and Delker (2016) reported on a program called, "Money Matters," that was part of an introductory academic development course. The program was only a week long, and it was aimed at increasing financial awareness. The reported result of the Money Matters program was supplemented student retention, but it was impossible to report on the financial literacy component due to the structure of the course (Reams-Johnson & Delker, 2016). Ene and Panait (2017) suggested that financial institutions, such as traditional banks, should increase their efforts in financial education and familiarize consumers with banking products. While these smaller efforts might be useful, their reach would be limited, and their effectiveness is difficult to assess. Thus, such programs were not be assessed in this study.

Financial Education and AFSs

The research on the relationship between sources of financial education and the use of AFSs is minimal (Harvey, 2019). Birkenmaier and Fu (2016b) found a relationship between financial education and the use of alternative services but did not explore the effects of the various sources of financial education and did not consider the frequency that consumers use of AFS. Harvey (2019) examined the relationship between mandated high school education and the use and frequency of use of AFSs but did not assess any other sources of financial knowledge, such as college, workplace, military, or parental financial education.

Additionally, Kim and Lee (2018) found a negative relationship between financial literacy scores and the use of payday loans. However, Kim and Lee did not measure the effect of financial education and did not account for other types of alternative financial alternative services (auto-title loans, pawn shops, and rent-to-own stores). Lin et al. (2016) found that those who participated in financial education had more correct answers to the objective assessment of financial literacy than those who were offered but did not participate in financial education and those who were not offered any financial education at all. There is an existing gap in the literature regarding the relationship between the source of financial education and the use and frequency of use of AFS.

Financial Education and Subjective Financial Knowledge

Subjective financial knowledge strongly relates to positive financial behaviors (Woodyard et al., 2017). Seay and Robb (2013) indicated that even though subjective financial knowledge is negatively associated with the use of payday loans and pawn shops, objective financial knowledge was a better predictor of positive financial behaviors. Woodyard et al. (2017) noted that the combination of low objective financial knowledge and high subjective financial knowledge led to higher usage of AFSs. This finding was consistent with the findings in Robb et al.'s study (2015). One of the research objectives in this study is to examine the relationship between the source of financial education and the subjective knowledge of consumers.

Researchers have focused their efforts to measure the effects of financial education, financial literacy, financial capability, and financial knowledge on financial behaviors (Lee et al., 2017; Geddes & Steen, 2016; DeHart et al., 2016). Research on the

relationship between financial education and subjective knowledge remains limited. Xiao and O'Neill (2016) found that financial education was positively associated with both objective and subjective financial literacy. Woodyard et al. (2017) stressed that the combination of high objective and subjective financial knowledge shows improved financial behavior. Thus, this study intends not to only measure the effect of the source of financial education on the use and frequency of use of AFSs, but to also examine the effects of the sources of financial education on the subjective financial knowledge of consumers. The reason is that both objective and subjective financial knowledge are essential when making financial decisions.

Methodology

The methodology for this study was quantitative, with a correlational approach. The researcher selected the quantitative research methodology because of the postpositivist worldview of the researcher that leads to a quantitative research (Abutabenjeh & Jaradat, 2018), the tendency of the researcher to remain objective and contribute to the advancement of theory, and the nature of the data used for analysis (McCusker & Gunaydin, 2015). The researcher chose the explanatory correlational design because the purpose of this study is to assess the extent of the relationship between two or more variables in the same population (Curtis, Comiskey, & Dempsey, 2016). The researcher did not intend and was unable to manipulate the variables of interest, and, therefore, the correlational design was the appropriate choice (Curtis et al., 2016).

In quantitative correlational research, there is an attempt to assess the direction and the extent of a relationship between variables, and researchers attempt to determine how differences in one variable are related to the differences in another variable (Curtis et al., 2016). Since the main research questions of this study assess the extent to which, if any, the source of financial education is related to the use and frequency of use of AFSs, the quantitative methodology with a correlational design is the most appropriate. The variables of interest in this study contain information about consumers' personal characteristics, leading to the use of research tools that measure the variables directly (Curtis et al., 2016).

The researcher used reliable data that is objective, valid, and usable. The choice of appropriate statistical analysis to determine the relationship between variables largely depended on the type of data (Curtis et., 2016). The researcher used various statistical tests to analyze the proposed research questions. Binary logistic regression was used to relate the independent variables to the dependent variable in the first research question. Binary logistic regression is the most appropriate to test the relationships between the variables in the first research question because this regression is used to test the influence of categorical predictors on an outcome variable that is binary. The results of the binary logistic regression were interpreted by assessing the p-value and odds ratios. In the analysis of the first research question, the researcher assessed the relationship between each of the independent variables, such as the financial education obtained at high school, college, workplace, military, or by parents/guardians and the types of AFS used.

The second research question attempted to determine the extent, if any, to which the source of financial education is related to the frequency of use of AFS. Considering that the dependent variables are count variables—representing the number of times a consumer obtained an AFS loan—the most appropriate statistical test to answer the second research question is Poisson regression. When the dependent variable is a count variable, and the researcher examines how the count changes as the predictor variable changes, Poisson regression is the most appropriate (AVCI, 2018). When using Poisson regression for statistical analysis, it is salient for the researcher to check for over- or under-dispersion of the data, which can be remedied with the use of negative binomial regression or by zero-inflated Poisson model (AVCI, 2018).

The third research question examined whether the source of financial knowledge influenced the respondents' self-rated (subjective) financial knowledge. One-way ANOVA analysis is appropriate to assess the differences in the means of the dependent variables when there are categorical independent variables and an interval dependent variable with a normal distribution (Curtis et al., 2016). Considering that the dependent variable is a continuous variable and the independent variables are categorical variables, one-way ANOVA was appropriate for the third research question.

Other Relevant Research

Other studies used the quantitative methodology to examine the effects of financial education and the use of AFSs. Birkenmaier and Fu (2016b) found a relationship between financial education and the use of AFS but did not explore the effects of the various sources of financial education and did not consider the frequency of

use of AFS. The researcher in this study examined the relationship, if any, of the sources of financial education and the use and frequency of use of AFS. Harvey (2019) explored the effects of mandated high school education on the use of AFSs. In her study, Harvey (2019) did not measure the effect of other sources of financial education, such as financial education received in college, at the workplace, in the military, and by parents, on the use of AFSs. Additionally, Harvey (2019) only measured the effect on payday loans and rent-to-own stores. Thus, the researcher in this study was able to measure the effects of all sources of financial education on the use and frequency of use of AFSs.

Regression analyses, and more specifically, Harvey (2019) used negative binomial regression and zero-inflated Poisson regression analyses to assess the relationship between mandated high school financial education and the use and frequency of use of AFSs. As part of their study on financial education and financial capability, Xiao and O'Neill (2016) used regression analyses to examine the effect of financial education on the subjective financial literacy of consumers. Xiao and O'Neill (2016) conducted their analyses on an archival dataset from the 2012 National Financial Capability Study. This study focused on the 2015 National Financial Capability Study, providing a unique aspect of the relationship between sources of financial education and the use and frequency of use of AFSs.

Summary and Conclusions

The major theme of this Chapter was a literature review regarding the use and effects of AFSs, AFS regulation, financial education, and the sources of financial education and their effects on consumers' financial behaviors. The researcher explained

the general and specific problems explored in this study along with a literature search strategy. Further, the researcher discussed the reasons for the study from the perspective of two behavior theories. Many consumers continue to use costly AFSs, and financial education among the population remains low. This study might fill a gap in the existing literature regarding the effects of various sources of financial education on the use and frequency of use of AFS and might extend the knowledge of the extent of those effects. This study intended to fill the identified literature gap by using and analyzing archival data, utilizing quantitative, explanatory correlational design, which the researcher describes in Chapter 3.

Chapter 3: Research Method

The purpose of this quantitative correlational study is to examine if and to what extent sources of financial education relate to the use and frequency of use of AFSs among U.S. consumers. Financial education can improve many financial behaviors decisions of individuals, but there is no test regarding how sources of financial education relate to the use and frequency of use of AFS (Harvey, 2019). Understanding if sources of financial education for individuals relate to the use and frequency of use of AFS may lead to a better understanding about which sources of financial knowledge deter consumers from unhealthy and high-cost borrowings. Decreased use of AFS may contribute to improved emotional and physical health (Eisenberg-Guyot et al., 2018; Sweet et al., 2018) and improved welfare (Lim et al., 2014). In this study, the researcher used reliable and validated data collected through a national survey to assess the variables under examination.

In this chapter, the researcher presents the research design and rationale to address the purpose of the study. Additionally, the researcher discusses the methodology of this study, including the population, sampling, procedures for recruitment, participation, data collection, archival data, instrumentation, operationalization of constructs, and manipulation of independent variables. Finally, the researcher will discuss the data analysis plan and threats to validity, including internal validity, external validity, construct validity, and ethical procedures.

Research Design and Rationale

This study was quantitative, using an explanatory correlational research design. The independent variables are the various sources where participants obtained their financial education, operationalized as high school, college, workplace, military, and parents/guardians. The dependent variables are participants' self-rating of financial knowledge and types of AFS that they use, which were auto-title loans, payday loans, pawn shops, and rent-to-own stores. Using a quantitative correlational design, the researcher assessed the significance of the relationship between the independent and dependent variables. Quantitative correlational research involves assessing the direction and extent of a relationship between variables, and researchers attempt to determine how differences in one variable are related to the differences in another variable (Curtis et al., 2016). Since the research questions of this study assess the extent to which, if any, sources of financial education are related to the use and frequency of use of AFSs, the quantitative methodology with a correlational design was the most appropriate.

The quantitative research method is appropriate for this study. The researcher selected the quantitative research methodology due to the postpositivist worldview of the researcher that leads to quantitative research (Abutabenjeh & Jaradat, 2018), the tendency of the researcher to remain objective and contribute to the advancement of theory, and the nature of the data used for analysis (McCusker & Gunaydin, 2015). Abutabenjeh and Jaradat (2018) said that the postpositivist worldview of the researcher leads to quantitative research, due to the philosophy of anticipating cause-effect relationships. Quantitative strategies of inquiry include correlational studies, experimental studies, and

quasi-experimental studies, in which the researcher might collect numeric data and use statistical analyses and methods of interpretation to analyze the data and interpret the results.

The qualitative research design is not appropriate for this study because qualitative studies consider participants' views and life experiences (Abutabenjeh & Jaradat, 2018), which is not the purpose of this study. The mixed methods design is better suited for answering more complex research questions and uses both qualitative and quantitative data (McCusker & Gunaydin, 2015). Abutabenjeh and Jaradat (2018) said that the mixed methods design was based on the pragmatist worldview, whereas the correlational design generally uses available secondary data, making it inexpensive compared to the mixed methods design (Omair, 2015). The quantitative research method leads to generalizable findings (Abutabenjeh & Jaradat, 2018).

The researcher used the explanatory correlational research design in this study. The explanatory correlational design is appropriate because researchers can use it to describe and measure the association or relationship between variables or sets of scores, without controlling or manipulating the variables (Özkal, 2018; Edmonds & Kennedy, 2013). The researcher chose the explanatory correlational design because the purpose of this study is to assess the extent of the relationship between two or more variables in the same population (Curtis et al., 2016). The researcher did not intend and was unable to manipulate the variables of interest, and, therefore, the correlational design was the appropriate choice (Curtis et al., 2016).

Additionally, a correlational design can find an association between two or more variables and is most commonly used for archival data from governmental databases on a national level (Omair, 2015). Although some scholars have suggested establishing an association between variables as the first criterion of causality (Creswell, 2019; Babbie, 2017; Omair, 2015), The prediction correlational design is not appropriate for this study. The researcher intended to assess the relationship between the independent and dependent variables using archival data collected at one point in time and analyze all participants as a single group. The prediction correlational design requires researchers to measure predictor variables and criterion variables at different points in time and predict future performance (Şimsek & Yazar, 2017), which is not the purpose of this study.

Methodology

Population

The target population of this study is a group of individuals that share characteristics and that the researcher wants to study and draw conclusions about (Abutabenjeh & Jaradat, 2018). The target population for this study was adult U.S. consumers aged 18 years or older who received financial education. Of the total population in the United States in 2017, 77.4% (or approximately 252,106,643 people) were adults (United States Census Bureau, 2017). The researcher used archival data that the FINRA Foundation collected as part of the NFCS for this study. Approximately 21% of respondents in the NFCS study received financial education.

Sampling and Sampling Procedures

The researchers for the 2015 state-by-state survey collected data using nonprobability quota sampling, with over-sampling in four states that had a larger population (Mottola & Kieffer, 2017). Quota sampling addresses representativeness by selecting a sample with prespecified characteristics, with the same distribution of characteristics among the studied population (Babbie, 2017). Additionally, the national figures in the NFCS 2015 state-by-state survey can be weighted to be representative of the national population (Mottola & Kieffer, 2017). The dataset that the researcher used in this study was the NFCS, which is a national study that covered 27,564 American adults, averaging 500 per state, except for larger states such as New York, Texas, Illinois, and California, in which there were oversamples of 1,000 (FINRA, 2016). The NFCS was representative of the national population according to census distributions (FINRA, 2016).

The sample for this study included respondents who participated in financial education in high school, college, workplaces, the military, or received financial education through their parents/guardians. The sample included only the respondents who answered if they used AFS and how many times. The secondary data contains 27,564 responses, and the researcher included 888 in the sample size because this was the number of respondents who have complete data on all independent and dependent variables. Larger sample size in quantitative studies reduces sampling errors (Tavakol & Sandars, 2014). A sample size adequate for conducting a correlational study that examines the relationship between variables should include approximately 50

participants, but a larger sample size should provide better representativeness and less error variance (Morgan & Voorhis, 2017). Thus, the selected sample for this study was enough.

Procedures for Recruitment, Participation, and Data Collection

The data used in this study is archival data. The respondents were selected from established online panels, which contained millions of individuals who received incentives for their participation (Applied Research and Consulting, 2015). There was an oversampling in four larger states, and the quotas were set per the census distributions according to age, gender, ethnicity, education level, and income (Mottola & Kieffer, 2017).

Archival Data

The researcher used archival data in this study. The Financial Industry Regulatory Authority Foundation collected the archival data as part of the NFCS in 2015. The researchers collected the data for the 2015 state-by-state survey using nonprobability quota sampling, with over-sampling in four states with a larger population (Mottola & Kieffer, 2017). Quota sampling addresses representativeness by selecting a sample with prespecified characteristics, with same characteristics distribution among the studied population (Babbie, 2017). Additionally, the national figures in the NFCS 2015 state-by-state survey can be weighted to be representative of the national population (Mottola & Kieffer, 2017). The researcher used the NFCS dataset for this study which was a national study that covered 27,564 American adults, averaging 500 per state, except for larger states such as New York, Texas, Illinois, and California, in which there were oversamples

of 1,000 (FINRA, 2016). The NFCS was representative of the national population according to census distributions (FINRA, 2016). The archival dataset is already available online, and it is permitted to use for educational research, such as this study. As a courtesy, the researcher requested and was granted permission to use the dataset required for this study.

Numerous studies have used the dataset from NFCS to assess various research questions regarding U.S. consumers' financial capabilities. Researchers have used this dataset to: examine the effects of perceived and actual financial literacy on respondents' financial behaviors (Allgood & Walstad, 2016); to measure the association between use of AFSs and financial access (Birkenmaier & Fu, 2016b); to investigate the relationship between risk tolerance, financial literacy, and goals-based behavior of households (Chatterjee, Fan, Jacobs, & Haas, 2017); to examine the effect of a high school mandated financial education on the economic well-being of young adults (Cornwell & Murphy, 2016); to examine the impact of a high school mandated financial education on the use of AFSs (Harvey, 2019); and, to measure the relationship between financial literacy and the use of payday loans (Kim & Lee, 2018). The researcher in this study used the NFCS dataset to assess the relationship between the source of financial education and the use and frequency of use of AFS, which would offer a unique perspective.

The researcher used data from the NFCS dataset to answer the research questions of this study. The researcher used responses to questions regarding the sources from which participants obtained their financial education. Additionally, the researcher used responses to questions regarding the types of AFSs and the frequency at which

participants obtained these loans. Finally, the researcher used the responses to the question regarding the respondents' self-assessment of their financial knowledge.

Instrumentation and Operationalization of Constructs

The instrument that researchers used in the 2015 NFCS survey was the 2015 NFCS State-by-State Survey Instrument, which was developed from the 2012 NFCS questionnaire (Mottola & Kieffer, 2017). A multidisciplinary team developed the questionnaire for the NFCS was designed in 2009 and was modified for the 2012 and 2015 surveys to make it better suited for online administration (Mottola & Kieffer, 2017). The researcher used the 2015 NFCS state-by-state survey for this study.

The researcher assessed the relationship between the sources of financial knowledge and the use and frequency of use of AFSs in this study. Additionally, the researcher explored the relationship between sources of financial knowledge and the respondents' self-rating of financial knowledge. The 2015 NFCS state-by-state survey is appropriate to this study because it contains data about all variables assessed. This survey is already available online and it is permitted to use for educational research, such as this study.

Operationalization of Variables

The dependent variables in this study include the self-rating of financial knowledge and the types of AFSs that the participants used, operationalized as auto-title loans, payday loans, pawn shops, and rent-to-own stores. The independent variables were the sources of financial education, operationalized as financial education received in

high school, college, at the workplace, in the military, and learning how to manage finances from parents/guardians.

The NFCS (FINRA, 2016) asked the following questions regarding AFSs: "In the past 5 years, how many times have you…

1. Taken out an auto-title loan? Auto-title loans are loans where a car title is used to borrow money for a short period of time. They are NOT loans used to purchase an automobile.
2. Taken out a short term "payday" loan?
3. Used a pawn shop?
4. Used a rent-to-own store?"

The possible responses to the proposed questions were "Never;" "1 time;" "2 times;" "3 times;" "4 or more times;" "Don't Know;" and, "Prefer not to Say."

The question regarding the respondents' self-rating of financial knowledge was the following: "On a scale from 1 to 7, where 1 means very low and 7 means very high, how would you assess your overall financial knowledge?"

The possible responses were "1-Very Low," "2," "3," "4," "5," "6," "7-Very High," "Don't Know," and "Prefer not to Say."

The independent variables regarding the source of financial education asked in the NFCS (FINRA, 2016) were the sources of financial education obtained in high school, college, by employer, in the military, and by parents/guardians. The interview questions were as follows:

1. "Was financial education offered by a school or college you attended, or a workplace where you were employed?"

The possible answers to this question were "Yes, but I did not participate in the financial education;" "Yes, and I did participate in the financial education;" "No;" "Don't know;" and, "Prefer not to Say." The respondents who answered "Yes, and I did participate in the financial education," answered additional questions regarding the source of financial education:

   a. "When did you receive that financial education?
      i. In high school
      ii. In College
      iii. From an employer
      iv. From the military"

The possible answers for each source of financial education were: "Yes," "No," "Don't know," and "Prefer not to Say."

2. "Did your parents or guardians teach you how to manage your finances?"

The possible answers to this question were: "Yes," "No," "Don't know," and "Prefer not to Say."

Once the researcher operationalized the variables used in this study and they become known, the next procedure is to conduct a data analysis plan. In the next section, the researcher described the data analysis plan.

Data Analysis Plan

The research questions stated in Chapter 1 are restated in this section. The appropriate null and research hypothesis are also restated in this section. Further, in this section, the data analysis plan to answer the research questions were discussed.

RQ1: To what extent, if any, is the source of financial education related to the type of AFS used?

$H_0 1$: The source of financial education is not related to the type of AFS used.

$H_a 1$: The source of financial education is related to the type of AFS used.

RQ2: To what extent, if any, is the source of financial education related to the frequency of use of AFS?

$H_0 2$: The source of financial education is not related to the frequency of use of AFS.

$H_a 2$: The source of financial education is related to the frequency of use of AFS.

RQ3: To what extent, if any, is the source of financial education related to the self-rating of financial knowledge?

$H_0 3$: The source of financial education is not related to the self-rating of financial knowledge.

$H_a 3$: The source of financial education is related to the self-rating of financial knowledge.

The study was quantitative and included an explanatory correlational design. Thus, the study warranted the use of quantitative software for statistical analysis. The researcher utilized software in this study for statistical analysis, which is the Statistical

Package for the Social Sciences (SPSS). The NFCS data already provides a file compatible with SPSS.

Data Cleaning and Screening

The researcher anticipates the need to clean and screen data for consumers who answered the questions in the survey pertaining to this study. The researcher included the respondents who answered the required questions in the sample. The researcher excluded respondents who did not answer the questions pertaining to this study from the sample. The required questions include answers to the source of financial education, self-rating of financial knowledge, and whether they have obtained an AFS loan.

Utilizing the archival dataset, the researcher anticipates that some variables needed to be transformed into new variables. The researcher outlined the types of consumer responses earlier in this chapter, in the operationalization of variables section. The researcher needed to transform some variables into new variables to answer the research questions in this study. For example, all AFS questions contain responses of "Never," which the NFCS study equated with the value of 1. When a respondent answered that he or she used AFS "1 time," the associated value is 2. These values need to be recoded, so that "Never" represents a zero value, and the other values correspond the number of times AFS has been used.

Additionally, the responses to the AFS questions contained the frequency at which respondents used these loans. The response "Never" meant that they had not used an AFS loan. To answer the first research question, the researcher needed to record all AFS variables into "0" for a response of "Never" and into "1" for a response of "1 time,"

"2 times," "3 times," and "4 or more times." The "0" represented respondents who did not use AFS, and the "1" represented respondents who used AFS. Further, the independent variables were recoded to create binary variables for the binary logistic regression tests (Doane & Seward, 2016).

Research Questions Analysis

There are three research questions in this study. The researcher used various statistical tests to analyze the proposed research questions. The choice of appropriate statistical analysis to determine the relationship between variables largely depended on the type of data (Curtis et., 2016). The first research question is to determine the extent, if any, to which the source of financial education was related to the use of AFS. Binary logistic regression was used to relate the independent variables to the dependent variable in the first research question. Binary logistic regression is the most appropriate to test the relationships between the variables in the first research question because this regression is used to test the influence of categorical predictors on an outcome variable that is binary. In the analysis of the first research question, the researcher assessed the relationship between each of the independent variables and the types of AFS used. Since the independent variable is a categorical variable, the researcher needs to conduct the appropriate coding to create binary predictor variables (Doane & Seward, 2016). The researcher interpreted the results by assessing the p-values, the Beta coefficients and odds ratios for each variable to assess the relative strength of the predictor variables within the model.

The second research question was to determine the extent, if any, to which the source of financial education was related to the frequency of use of AFS. Considering that the dependent variables are count variables—representing the number of times a consumer obtained an AFS loan—the most appropriate statistical test to answer the second research question is Poisson regression. When the dependent variable is a count variable, and the researcher examines how the count changes as the predictor variable changes, Poisson regression is the most appropriate (AVCI, 2018). When using Poisson regression for statistical analysis, it is salient for the researcher to check for over- or under-dispersion of the data, which can be remedied with the use of negative binomial regression or by zero-inflated Poisson model (AVCI, 2018).

The Poisson distribution shows the number of occurrences within a random unit of time (Doane & Seward, 2016). Harvey (2019) also used the negative binomial and zero-inflated Poisson regression models to assess the impact of high school financial education mandate on the use and frequency of use of AFSs. The researcher of this study interpreted the results by assessment of the log likelihoods, p-values for the significance of the model, z-score, p-value for Poisson coefficients, logit coefficients, and Vuong test.

The third research question was to examine whether the source of financial knowledge influences the respondents' self-rated (subjective) financial knowledge. One-way ANOVA analysis is appropriate to assess the differences in the means of the dependent variables when there are categorical independent variables and an interval dependent variable with a normal distribution (Curtis et al., 2016). Doane and Seward (2016) listed the ANOVA assumptions as "observations on Y are independent,

populations being sampled are normal, and populations being sampled have equal variances" (p. 439). Considering that the dependent variable is a continuous variable and the independent variables are categorical variables, one-way ANOVA was appropriate for the third research question. The researcher interpreted the results by assessing the means of the predictor variables, the F-test for the model, the degrees of freedom, and the p-value to assess whether to reject the null hypothesis.

Threats to Validity

Babbie (2017) explained validity as the extent to which the measurement is suitable for the concept under consideration. Threats to validity in a study can cause the researcher to misunderstand the appropriateness of the methodology. There are three types of validity: external validity, internal validity, and construct validity. Each type is discussed in the following section.

External Validity

External validity refers to the validity of variables' relationships regarding their generalizability to the population (Creswell, 2019). The threat to external validity identified in this study is the effect of exclusion criteria when conducting the statistical tests to answer the research questions. Namely, the researcher included only those respondents who answered the questions pertaining to this study in the statistical analysis, excluding all others. Another threat to external validity is the sampling procedures used to collect the data. FINRA used nonprobability quota sampling (Mottola & Kieffer, 2017). Although Babbie (2017) argued that quota sampling addresses representativeness

by selecting a sample with prespecified characteristics, the method is not as strong as probability sampling.

Further, the possibility of multiple experiment interference could threaten external validity. FINRA's study collected data three times in 2009, 2012, and 2015. Although unlikely, it is possible that some respondents were exposed to the survey instrument more than once, which might have some impact on the results. Finally, considering the significant amount of time respondents needed to complete the survey, it is possible that respondents encountered many distractions while completing the survey questionnaire.

Internal Validity

Threats to internal validity are the most serious because they can undermine the study. One threat of internal validity is the recall time of the respondents. The AFS questions asked the respondents the number of times they had used AFSs in the past five years. It is possible that some respondents forgot about obtaining such loans and their answers might have been misleading. Another threat to internal validity might be omitting confounding variables from the statistical analysis. Confounding variables are variables that were not measured even though they may influence the relationship between the assessed independent and dependent variables. In this study, a relationship between the sources of financial education and the use of AFSs was considered.

Construct Validity

Assessing the validity of the conclusions based on evidence and reasoning about the constructs or variables is critical to the research study (Creswell, 2019). The only identified threat to construct validity in this study is the type of financial education that

the participants received. There is no universal financial education or financial literacy measurement tool (Delgadillo, 2014). However, this is not of concern to the study because the purpose is not to measure the level of financial knowledge but to assess whether the source of financial education affects the use of AFSs. The participants in the NFCS answered questions about whether they have been offered, whether they participated in, and the venue at which they participated in financial education.

Ethical Procedures

The data used in this study originated from the NFCS that FINRA conducted in 2015. The archival dataset is already available online, and it is permitted to use for educational research, such as this study. As a courtesy, the researcher plans to request permission to use the dataset required for this study.

The researcher did not collect primary data because validated archival data is already available, making this study affordable, valuable, and offering an original perspective. The participants in the original study were incentivized and made aware of the purpose and use of the data, as well as the treatment of their personal information (Mottola & Kieffer, 2017). Additionally, the archival data collected anonymous responses.

This study was a nonexperimental quantitative study without any manipulation of the variables studied. The researcher obtained an IRB approval to conduct research with the archival dataset used this study (approval # 03-06-19-0557286). The researcher plans to download the data and analyze it according to the data analysis plan while protecting it with a password on a local computer. Given the anonymized nature of the data, the

nonexperimental research design, and the allowed use of the data for educational research, the researcher identified no ethical concerns.

Summary

This chapter explained the type of methodology, research design, and statistical tools of this study. The researcher explicitly discussed the population, sampling procedures, and operationalization of variables. The archival data that the researcher used in this study was also described. Further, the researcher explained were the threats to external validity, internal validity, and construct validity. This study used archival data from the NFCS. The next chapter presents the statistical analysis and results of the study.

Chapter 4: Results

The purpose of this quantitative correlational study was to examine if and to what extent sources of financial education related to U.S. consumers' use and frequency of use of AFS. There were three research questions in this study. RQ1 focused on examining the extent, if any, to which sources of financial education related to the use of AFSs. The research hypotheses were meant to predict the relationship between the predictor independent variables and dependent variables. RQ2 focused on examining the extent, if any, to which the sources of financial education related to the frequency of use of AFSs.

The research hypotheses attempted to determine the effect of the explanatory variables on the response variables. RQ3 focused on examining the extent, if any, to which sources of financial education related to participants' self-rating of financial knowledge. The research hypotheses attempted to determine if there was any statistically significant difference between the means of the studied variables. In this chapter, the researcher first describes the data collection procedures. Second, the researcher presents the results of the study, including descriptive statistics, research question analyses, and appropriate statistical assumptions.

Data Collection

The researcher used archival data in this study, which the FINRA collected as part of the NFCS in 2015. The researchers from the FINRA Foundation in the NFCS collected the data for the 2015 state-by-state survey using nonprobability quota sampling, with oversampling in four states with a larger population (Mottola & Kieffer, 2017). Quota sampling addresses representativeness by selecting a sample with prespecified

characteristics, with same characteristics distribution among the studied population (Babbie, 2017). The national figures in the NFCS 2015 state-by-state survey can be weighted to be representative of the national population (Mottola & Kieffer, 2017). The researcher tested the relationship between sources of financial education and the use and frequency of use of AFSs. The independent variables were the different sources of financial education, such as high school, college, workplace, military, and parents/guardians. The participants who obtained financial education in any of these venues were compared to participants who did not receive any financial education.

The researcher used the 2015 state-by-state dataset for this study, after the FINRA Foundation and Institutional Review Board (IRB) at Walden University had granted their approval to conduct research (approval #03-06-19-0557286). The NFCS dataset was a national study that covered 27,564 American adults, averaging 500 per state, except for larger states such as New York, Texas, Illinois, and California, in which there were oversamples of 1,000 (FINRA, 2016). The NFCS was representative of the national population according to census distributions (FINRA, 2016). The researcher presented the descriptive statistics for the use and frequency of use of AFSs, sources of financial education, and self-rating of financial knowledge.

Table 2

Descriptive Characteristics for AFS Use

AFS use	N	%
Auto-title loan		
Never	24671	89.5
1 time	1414	5.1

2 times	619	2.2
	313	1.1
4+ times	247	0.9
Payday loan		
Never	24193	87.8
1 time	925	3.4
2 times	710	2.6
3 times	565	2.0
4+ times	852	3.1
Pawn shop		
Never	23091	83.8
1 time	1438	5.2
2 times	1005	3.6
3 times	735	2.7
4+ times	987	3.6
Rent-to-own store		
Never	24791	89.9
1 time	1073	3.9
2 times	633	2.3
3 times	436	1.6
4+ times	345	1.3

Table 3

Descriptive Characteristics for Sources of Education

Source of Education	N	%
High school		
No	18738	85.6
Yes	3158	14.4
College		
No	17485	82.8
Yes	3633	17.2
Employer		

No	19567	89.4
Yes	2330	10.6
Military		
No	16603	97.4
Yes	436	2.6
Parents/guardian		
No	13945	52.4
Yes	12652	47.6
Self-Rated Financial Knowledge	Mean	Standard Deviation
Scale 1-7	5.26	1.20

Study Results

This chapter contains the results of the study; the interpretation of these findings appears in Chapter 5. In this section, the researcher provides statistical assumptions and analyses of the research questions. In the analysis of RQ1, the researcher assessed the relationship between each of the independent variables and the types of AFS used by using binary logistic regression. The researcher interpreted the results by assessing p-values, Beta coefficients, and odds ratios for each variable to assess the relative strength of the predictor variables within the model. In the analysis of RQ2, the researcher assessed the relationship between the variables using Poisson regression.

When using Poisson regression for statistical analysis, it is necessary for the researcher to check for over- or under-dispersion of data or excess zeroes, which can be remedied with the use of negative binomial regression (AVCI, 2018). The researcher interpreted the results through assessment of log likelihoods, p-values for the significance of the model, z-score, p-values for Poisson coefficients, logit coefficients, and Vuong test. To analyze RQ3, the researcher used one-way ANOVA. The researcher interpreted

the results by assessing the means of the predictor variables, F-test for the model, degrees of freedom, and p-values to assess whether to reject the null hypothesis.

RQ1: Statistical Analysis

RQ1: To what extent, if any, is the source of financial education related to the type of AFS used?

$H_0 1$: The source of financial education is not related to the type of AFS used.

$H_a 1$: The source of financial education is related to the type of AFS used.

To examine whether the source of financial education related to using AFSs, the researcher conducted four binary logistic regressions predicting each type of AFS by sources of education. Assumptions of logistic regression with binary predictors were: the outcome must be binary; achieve independence of observations—the same person cannot be listed more than once in a dataset (in other words, each row of data should be independent from every other row; and have a reasonable sample size—ideally, there should be 10 cases (people) with the least frequent outcome for each IV in the model. The least frequent outcome was "using a rent-to-own store" (9.0% of the sample). If there are 5 IVs, a sample size of (10*5 / .09) = 556 would be necessary.

Table 4

Sources of Financial Education and Auto-title Loans

Predictor	B	SE	Odds ratio
Received education in high school	0.53	0.17	1.71**
Received education in college	0.39	0.16	1.47*
Received education from employer	0.48	0.17	1.61**
Received education from military	0.57	0.18	1.77**
Received education from parents	-0.15	0.06	0.86*

Note. Binary logistic regression predicting use of auto-title loan from source of education (N = 888 – because this is the number of people who have complete data on all IVs and the DV); * $p < .05$; ** $p < .01$; *** $p < .001$.

The results of the binary logistic regression suggested that participants who received financial education in high school had 1.71 times greater odds of using an auto-title loan than those who did not receive financial education. Those who received financial education in college had 1.47 times greater odds of using auto-title loans than those who did not receive financial education. Those who received financial education from their employer had 1.61 times greater odds of using auto-title loans than participants who did not receive financial education. Participants who received financial education in the military had 1.77 times greater odds of using auto-title loans than participants who did not receive financial education. Finally, participants who received financial education from parents/guardians were 0.86 times less likely to use auto-title loans than participants who did not receive financial education.

Table 5

Sources of Financial Education and Payday Loans

Predictor	B	SE	Odds ratio
Received education in high school	0.67	0.17	1.95***
Received education in college	0.12	0.16	1.13
Received education from employer	0.25	0.17	1.28
Received education from military	0.58	0.17	1.78**
Received education from parents	-0.33	0.06	0.72***

Note. Binary logistic regression predicting use of payday loan from source of education * $p < .05$; ** $p < .01$; *** $p < .001$.

The results of the binary logistic regression suggested that participants who received financial education in high school had 1.95 times greater odds of using a payday loan than participants who did not receive financial education. For those who received financial education in the military, they were 1.78 times more likely to use a payday loan than participants who did not receive financial education. Participants who received financial education from parents were 0.72 times less likely to use payday loans than participants who did not receive financial education.

Table 6

Sources of Financial Education and Pawn Shops

Predictor	B	SE	Odds ratio
Received education in high school	0.35	0.16	1.41*
Received education in college	0.07	0.14	1.07
Received education from employer	-0.03	0.17	0.97
Received education from military	0.72	0.16	2.05***
Received education from parents	-0.15	0.05	0.86**

Note. Binary logistic regression predicting use of pawn shop from source of education * $p < .05$; ** $p < .01$; *** $p < .001$.

The results of the binary logistic regression suggested that participants who received financial education in high school had 1.41 greater odds of using a pawn shop than participants who did not receive financial education. For those who received financial education in the military, they were 2.05 times more likely to use a pawn shop than those with no form of financial education. Lastly, those whose parents had provided

financial education were 0.86 times less likely to use a pawn shop than those who received no form of financial education.

Table 7

Sources of Financial Education and Rent-to-own Stores

Predictor	B	SE	Odds ratio
Received education in high school	0.66	0.18	1.94***
Received education in college	0.19	0.17	1.21
Received education from employer	0.39	0.18	1.47*
Received education from military	0.54	0.18	1.71**
Received education from parents	-0.20	0.06	0.82**

Note. Binary logistic regression predicting use of rent-to-own store from source of education * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 7 illustrates the results of the binary logistic regression, which suggested that participants who received financial education in high school were 1.94 times more likely to use rent-to-own stores. Participants who received financial education from an employer had 1.47 greater odds of using rent-to-own stores than participants with no financial education. Those with financial education from the military were 1.71 more likely to use a rent-to-own store than participants who had no financial education. Lastly, those whose parents had provided them with financial education were 0.82 times less likely to use a rent-to-own store than participants with no financial education.

RQ2: Statistical Analysis

RQ2: To what extent, if any, is the source of financial education related to the frequency of use of AFS?

H_02: The source of financial education is not related to the frequency of use of AFS.

H_a2: The source of financial education is related to the frequency of use of AFS.

To examine whether the source of financial education was associated with the frequency of using AFS, the researcher conducted negative binomial regressions. Negative binomial regression was appropriate for zero-inflated data (see Figure 1).

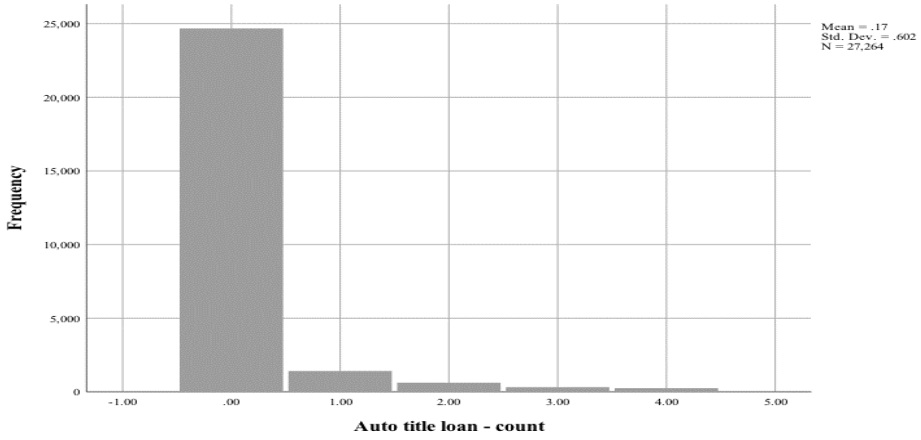

Figure 1. Frequency of use of auto-title loans.

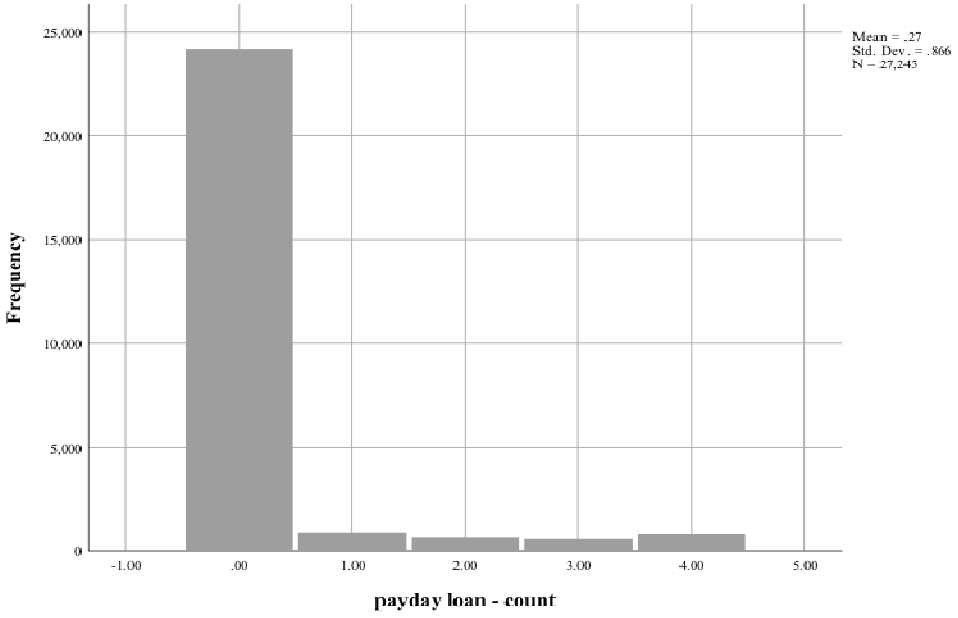

Figure 2. Frequency of use of payday loans.

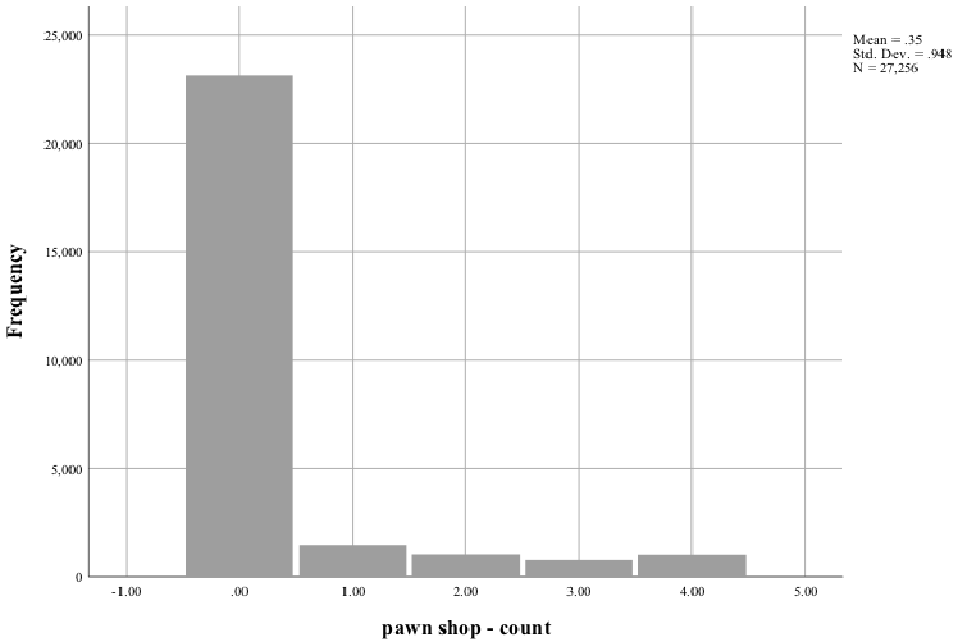

Figure 3. Frequency of use of pawn shops.

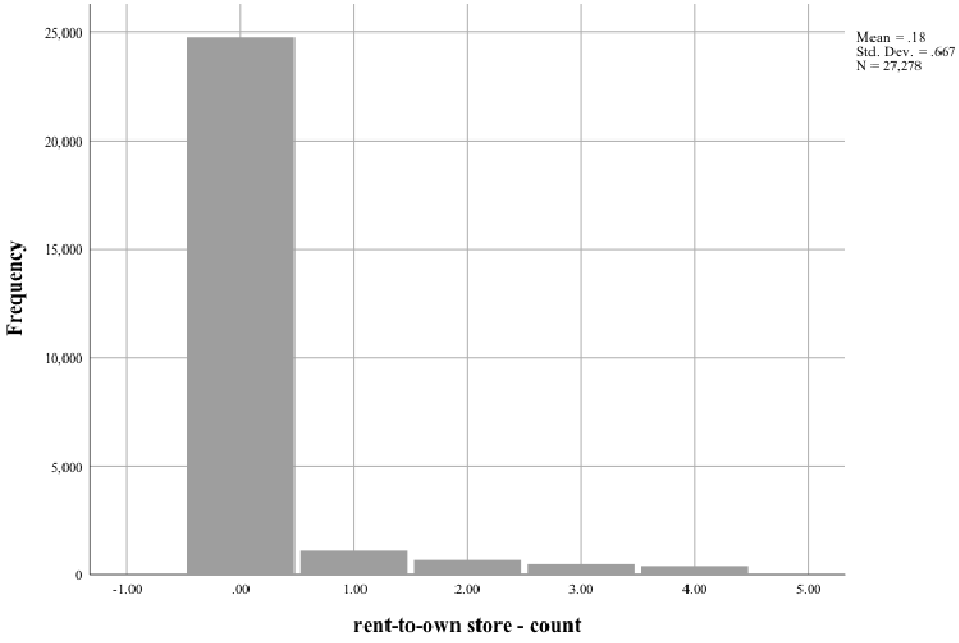

Figure 4. Frequency of use of rent-to-own stores.

Table 8

Sources of Financial Education and Frequency of Use of Auto-title Loans

Predictor	B	SE
Received education in high school	0.66***	0.13
Received education in college	0.34**	0.12
Received education from employer	0.65***	0.13
Received education from military	0.57***	0.13
Received education from parents	-0.23***	0.05

Note. Negative binomial regression predicting frequency of use of auto-title loan from source of education * $p < .05$; ** $p < .01$; *** $p < .001$.

Receiving financial education in high school, college, from an employer, and in the military were each associated with more frequent auto-title loan use. Receiving financial education from parents, by contrast, resulted in a lower frequency of auto-title loan use.

Table 9

Sources of Financial Education and Frequency of Use of Payday Loans

Predictor	B	SE
Received education in high school	0.55***	0.12
Received education in college	0.12	0.11
Received education from employer	0.17	0.12
Received education from military	0.54***	0.12
Received education from parents	-0.41***	0.04

Note. Negative binomial regression predicting frequency of use of payday loan from source of education * $p < .05$; ** $p < .01$; *** $p < .001$.

Receiving education in high school and in the military were both associated with greater frequency of payday loan use, whereas the participants who received financial education from their parents reported a lower frequency of payday loan use.

Table 10

Sources of Financial Education and Frequency of Use of Pawn Shops

Predictor	B	SE
Received education in high school	0.20	0.12
Received education in college	0.14	0.10
Received education from employer	-0.04	0.12
Received education from military	0.73***	0.11
Received education from parents	-0.21***	0.03

Note. Negative binomial regression predicting frequency of use of pawn shop from source of education * $p < .05$; ** $p < .01$; *** $p < .001$.

Receiving financial education in the military was associated with an increased frequency of pawn shop use, whereas receiving education from parents correlated with a lower frequency of pawn shop use among the sample population.

Table 11

Sources of Financial Education and Frequency of Use of Rent-to-Own Stores

Predictor	B	SE
Received education in high school	0.80***	0.13
Received education in college	0.16	0.12
Received education from employer	0.52***	0.13
Received education from military	0.47***	0.13
Received education from parents	-0.30***	0.05

Note. Negative binomial regression predicting frequency of use of rent-to-own store from source of education * $p < .05$; ** $p < .01$; *** $p < .001$.

Receiving education in high school, from an employer, and in the military each correlated to a greater frequency of rent-to-own stores. By contrast, participants who received financial education from their parents reported a lower frequency of rent-to-own store use.

RQ3: Statistical Analysis

RQ3: To what extent, if any, is the source of financial education related to the self-rating of financial knowledge?

$H_0 3$: The source of financial education is not related to the self-rating of financial knowledge.

$H_a 3$: The source of financial education is related to the self-rating of financial knowledge.

To examine the relationship between the source of financial education and self-rated financial knowledge, the researcher conducted five one-way ANOVAs—one for each source of education. One-way ANOVA analysis is appropriate to assess the differences in the means of the dependent variables when there are categorical independent variables and an interval dependent variable with a normal distribution (Curtis et al., 2016). Considering that the dependent variable is a continuous variable and the independent variables are categorical variables, one-way ANOVA was appropriate for the third research question. The assumptions inherent to one-way ANOVAs included: (1) The dependent variable must be normally distributed and evaluated with a visual inspection of a histogram; (2) Homogeneity of variances—the dependent variable should

be approximately equal at both levels of independent variable; and (3) should be validated with Levene's test for each independent variable.

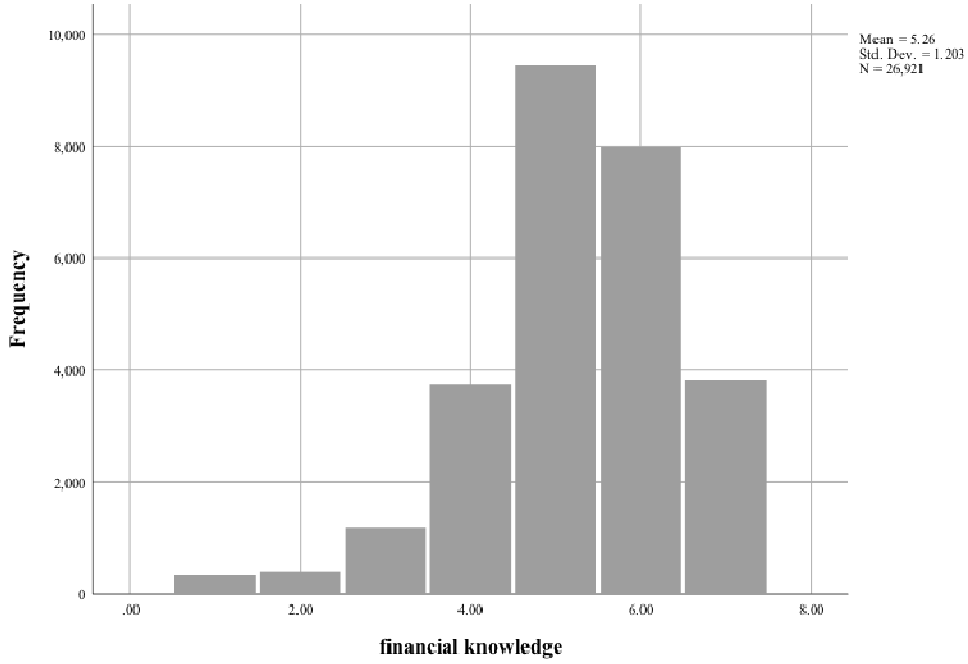

Figure 5. Frequency of financial knowledge.

The histogram for the dependent variable appears normal with a small skewness to the left. One-way ANOVA tolerates such violation with a minimal effect on Type I error.

Table 12

Sources of Financial Education and Self-Rating of Financial Knowledge

Independent variable	Levene statistic	df1	df2	p-value
Received education in high school	15.47	1	21518	<001
Received education in college	49.52	1	20760	<.001

Received education from employer	143.57	1	21522	<.001
Received education from military	52.23	1	16701	<.001
Received education from parents	51.73	1	26127	<.001

The assumption of homogeneity of variance is violated for each ANOVA. However, one-way ANOVA is robust to violations, especially in large samples, so it is acceptable to continue with the analysis.

Table 13

High school Financial Education and Self-Rating of Financial Knowledge

Source	M	SD	SS	df	MS	F
Received education in high school			445.69	1	445.69	313.29***
No	5.21	1.21				
Yes	5.62	1.07				
Error			30611.65	21518	1.42	
Total			31057.34	21519		

Note. One-way ANOVA comparing financial knowledge between those who did and did not receive financial education in high school * $p < .05$; ** $p < .01$; *** $p < .001$.

Participants who received financial education in high school had greater perceived financial knowledge than participants who did not receive financial education in high school, $F(1,21518) = .313.29$, $p < .001$.

Table 14

College Financial Education and Self-Rating of Financial Knowledge

Source	**M**	**SD**	**SS**	**df**	**MS**	**F**
Received education in college			929.53	1	929.53	666.86***

No	5.17	1.21				
Yes	5.73	1.01				
Error			28937.28	20760	1.39	
Total			29866.81	20761		

Note. One-way ANOVA comparing financial knowledge between those who did and did not receive financial education in college * $p < .05$; ** $p < .01$; *** $p < .001$.

Participants who received financial education in college reported higher self-rated financial knowledge than participants who did not receive financial education in college, $F(1, 20760) = 666.86$, $p < .001$.

Table 15

Employer Financial Education and Self-Rating of Financial Knowledge

Source	M	SD	SS	Df	MS	F
Received education from employer			1012.98	1	1012.98	726.34***
No	5.20	1.21				
Yes	5.90	.93				
Error			30015.11	21522	1.40	
Total			31028.09	21523		

Note. One-way ANOVA comparing financial knowledge between those who did and did not receive financial education from an employer * $p < .05$; ** $p < .01$; *** $p < .001$.

Participants who received financial education from their employers reported higher perceived financial knowledge than participants who did not receive financial education, $F(1, 21522) = 726.34$, $p < .001$.

Table 16

Military Financial Education and Self-Rating of Financial Knowledge

Source	M	SD	SS	df	MS	F

Received education in military			277.00	1	277.00	187.53***
No	5.17	1.22				
Yes	5.98	.87				
Error			24669.71	16701	1.48	
Total			24946.72	16702		

Note. One-way ANOVA comparing financial knowledge between those who did and did not receive financial education in military * $p < .05$; ** $p < .01$; *** $p < .001$.

Those participants who received financial education in the military reported higher perceived financial knowledge than participants who did not receive financial education, $F(1, 16701) = 187.53$, $p < .001$.

Table 17

Parental Financial Education and Self-Rating of Financial Knowledge

Source	M	SD	SS	Df	MS	F
Received education from parents			918.37	1	918.37	654.04***
No	5.09	1.28				
Yes	5.46	1.08				
Error			36686.04	26127	1.40	
Total			37604.40	26128		

Note. One-way ANOVA comparing financial knowledge between those who did and did not receive financial education from parents * $p < .05$; ** $p < .01$; *** $p < .001$.

Participants who received financial education from their parents reported higher perceived financial knowledge than participants who received no financial education, $F(1,26127) = 654.04$, $p < .001$.

Summary

In terms of RQ1, the participants' responses suggested that those who received financial education in high school and those who received financial education in the

military had greater odds of using auto-title loans, payday loans, pawn shops, and rent-to-own stores than those who did not receive any financial education. The participants who received financial education in college had greater odds of using auto-title loans than those who received no financial education. The participants whose employers had provided them with financial educations were more likely to use auto-title loans and rent-to-own stores than those who did not receive financial education. The participants who received financial education from their parents/guardians had lower odds of using auto-title loans, payday loans, pawn shops, and rent-to-own stores than those who did not receive financial education from their parents.

The participants' responses to RQ2 suggested that receiving financial education in high school, college, from an employer, or in the military correlated with more frequent auto-title loan use. Additionally, participants who reported receiving financial education in high school and from military used payday loans more frequently. Furthermore, receiving financial education in the military correlated with greater frequency of pawn shop use. Those participants who received financial education from their parents/guardians reported that they used auto-title loans, payday loans, pawnshop stores, and rent-to-own stores less frequently than those with no financial education.

In terms of RQ3, the participants who received financial education in high school, in college, from an employer, in the military, or from their parents/guardians all reported higher perceived financial knowledge than those participants with no financial education. In Chapter 5, the researcher provides a discussion and interpretation of the results presented in Chapter 4 and the potential implications of the current study.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative correlational study was to examine if and to what extent sources of financial education related to the use and frequency of use of AFS among U.S. consumers. Financial education can improve many financial behaviors and the financial decision-making capabilities of individuals (Kim et al., 2017; Tang, 2017; Tang & Peter, 2015; Van Campenhout, 2015; Widayati, 2015). Scholars have not evaluated how sources of financial education relate to the use and frequency of use of AFSs. The researcher conducted statistical analyses based on numerical data assessed from the 2015 NFCS.

The results from the study indicated that participants who received financial education in high school and those who received financial education in the military had greater odds of using and were associated with greater frequency of use of AFSs than those participants who did not receive financial education. The participants who received financial education in college had greater odds of using and were associated with greater frequency of use of auto-title loans. The participants who received financial education from employers had greater odds of using and were associated with greater frequency of use of auto-title loans and rent-to-own stores. Further, receiving financial education from parents/guardians was associated with lower odds and frequency of using AFSs. Finally, results indicated that participants who received financial education in high school, college, from an employer, in the military, as well as from parents/guardians all reported higher perceived financial knowledge than those participants who did not receive financial education.

Interpretation of Findings

Financial Education and Its Effects

Scholarly views on the effectiveness of financial education vary based on the sources of that education and the financial behaviors they affect. Financial education can improve many financial behaviors and the financial decision-making of individuals (Kim et al., 2017; Tang, 2017; Tang & Peter, 2015; Van Campenhout, 2015; Widayati, 2015). Sources of financial education might have different effects on various financial behaviors; in some cases, it might be inadequate, providing no benefits to certain financial behaviors (Harvey, 2019). Further, financial education could improve consumers' objective and subjective financial literacy, desirable financial behavior, perceived financial capability, and the financial capability index (Xiao & O'Neill, 2016).

This study provided a unique perspective on the issue of financial education, as very few studies have explored and evaluated different sources of financial education, and no studies have explored the effects of these different sources of financial education on consumers' use of AFSs. The findings in this study revealed that exposure to formal financial education did not contribute to reduced use and lower frequency of use of AFSs but, instead, contributed to the exact opposite. The findings in this study suggested that only parental financial education contributed to the reduced use and lower frequency of use of AFSs.

Financial Education Obtained in High School and AFSs

The results of the study suggested that participants who received financial education in high school had greater odds of using AFSs (and using them more

frequently) than those participants who did not receive financial education. These findings aligned with Geddes and Steen (2016), who argued that financial education offered in K-12 institutions might not be the appropriate setting for such an education due to the students' lack of experience in financial matters, lack of teacher training, and a lack of appropriate prerequisites that could enable students to grasp the concepts. Additionally, De Moor and Verschetze (2017) suggested that policymakers need to modify curricula to increase the willingness and capacity of educators to teach financial literacy. While Bruhn, Leao, Legovini, Marchetti, and Zia (2016) found that high school financial education improved financial behaviors in terms of saving and budgeting, they indicated that students were more likely to use high-cost credit for the purpose of consumer purchases, which aligns with the findings of this study.

Harvey (2019) indicated that financial education mandated in high school reduced the use of payday borrowing by 4% when compared to participants who received a nonmandated high school financial education. The distinction between the findings in this study and those of Harvey's study was that the latter examined the effect of mandated high school financial education of young adults on the use and frequency of use of AFSs, whereas this study included all participants who obtained high school financial education whether state-mandated or not and regardless of age. Additionally, Harvey (2019) did not examine auto-title loans and pawn shops. State-mandated high school financial education may differ significantly from elective high school financial education courses both in terms of standardization and quality. Urban, Schmeiser, Michael Collins, and Brown (2018) suggested that the positive effects of mandated high

school financial education were the result of "curriculum coordination, supplemental teaching resources provided by states, teacher training, and certification requirements" (p. 11). Further, Urban et al. (2018) suggested that teacher training that was more extensive and continuous in nature; additional certification incentives and student testing led to more significant improvement in credit outcomes.

The findings in this study may suggest that non-mandated, non-standardized, and elective high school courses on financial education do not yield the same results. Woodyard et al. (2017) indicated that the combination of low objective financial knowledge and high subjective financial knowledge might lead to higher usage of AFSs. This study found a relationship between financial education taken at high school and higher odds of using AFSs, as well as higher self-rating of financial knowledge. Thus, no financial education may be better than high school financial education without curriculum coordination, appropriate teacher training, and certification requirements. The results in this study warrant new analyses of financial education that should account for teacher training, certification requirements, and curriculum coordination.

Financial Education Obtained in College

The participants who received financial education in college had greater odds of using auto-title loans and used them with greater frequency than those with no financial education at all. There was no statistically significant relationship between the financial education received in college and other types of AFSs, such as payday loans, pawn shops, and rent-to-own stores. Auto-title loans, as opposed to other AFSs, are not regulated in most states and lack appropriate disclosures about the life and type of the loan, as well as

appropriate considerations about the ability of borrowers to repay the loan (Martin & Adams, 2012). Lee et al. (2017) suggested that prior financial education enabled consumers to process financial disclosures with high readability more accurately than individuals without prior financial education. Without the proper disclosures regarding a loan, it is conceivable how someone would miss the critical information that would otherwise deter him or her from obtaining that loan.

Additionally, Garrett, Rodermund, Anderson, Berkowitz, and Robb (2014) found a strong relationship between mobile payments and high-cost borrowing such as auto-title loans. The relationship between mobile payments and high-cost borrowings were attributed to their convenience for consumers and their impulsive spending tendencies. The growth of technological online financial products has threatened traditional financial institutions (Königsheim, Lukas, & Nöth, 2017). The lack of convenient integration of banking with technology might be one of the reasons why certain AFSs are more attractive to consumers as compared to traditional financial services. Wales (2015) stressed the importance of technology in financial products that would enable more consumers to access financial services.

Further, the quality of college financial education may also be the reason for the results of this study. Specifically, Redmond (2015) suggested that most vulnerable students come to college unprepared from an educational system that is ineffective due to lack of access to educational opportunities such as after-school programs and tutoring. Peach and Yuan (2017) suggested that focused financial education interventions based on students' characteristics are more effective than one universal approach because there are

significant differences among groups in terms of their financial behavior and attitudes based on gender, race, and college major.

The readiness of students to learn about personal finances plays a significant role; Graves and Savage (2015) found that chronically disadvantaged students did not have the opportunity to apply what they learned about finances, as opposed to students who only experienced a short-term disadvantage. The students in college should also be interested in what they are learning. The interest of college students in financial education largely depends on the anticipated return, time cost, financial independence, and gender (Harrington & Smith, 2016). Thus, the results in this study warrant new analysis of college financial education that should account for types of delivery of financial concepts, effectiveness of curriculum, and attainment of applicable skills.

Financial Education Obtained at the Workplace

The participants who received financial education from an employer were more likely to use auto-title loans and rent-to-own stores and with greater frequency. There was no statistically significant relationship between the financial education that the employers provided and the other types of AFSs, such as payday loans and pawn shops. The interpretation of these results can also be attributed to the lack of regulation of auto-title loans, the lack of appropriate disclosures about the life and type of the loan, and inappropriate considerations about the ability of the borrower to repay the loan (Martin & Adams, 2012). Harvey (2019) suggested that financial education can have a different effect on different AFSs due to the possibility that some participants did not know about all types of AFSs, as well as the lack of regulation of rent-to-own stores. Lack of proper

disclosures about a loan may mislead consumers and hide salient information that would otherwise deter him/her from obtaining that loan.

These results may also suggest that the employer provided inadequate financial education or that the financial education focused primarily on retirement while ignoring other financial behaviors. Geddes and Steen (2016) discussed the disadvantages of a workplace financial education, such as: a failure to follow standards, a lack of systematic financial education, and the fact that such programs were optional. Numerous studies reported the outcomes of workplace financial education as it contributes to using a budget, increased retirement planning, and better saving behavior (Clark et al., 2017; Collins & Urban, 2016; Prawitz & Cohart, 2014). Yet, these workplace financial education programs may not focus on debt behavior. MacKenzie (2017) indicated that financial education at the workplace should include more than just retirement planning; it should also focus on budgeting, debt management, maintaining an emergency fund. Collectively, these topics might improve the outcomes on the AFS use.

Financial Education in the Military

The results from the study indicated that participants who received financial education in the military were more likely to use auto-title loans, payday loans, rent-to-own stores, and pawn shops than those participants who did not receive financial education. The results of this study align with the findings of Walstad et al. (2017), who found that members of the U.S. military generally have low levels of financial knowledge and frequently use AFSs. The results of this study may relate to those of Skimmyhorn (2016), who investigated the effects of a personal fiscal management course in the U.S.

Army. He concluded that it reduced the probability of having credit balances, delinquencies, and adverse legal actions for the first year after the course, but it had no long-term effects.

This study did not consider the time period that lapsed between completing financial education in the military and the time participants obtained an AFS loan. Thus, it is possible that either the financial education obtained in the military was not effective in deterring consumers from AFSs, or it did not have a long-lasting effect. The results of this study indicate that financial education provided in the military may to contribute to the increased use and frequency of use of AFSs.

Financial Education Obtained by Parents

Participants who received financial education from parents/guardians were less likely to use AFSs and would use them less frequently. Parental financial education is the only form of education that had a positive effect on the use and frequency of use of AFSs, which is curious. These findings aligned with the findings in many other studies that confirm the positive financial behavior as a result of parental financial education. Yong and Tan (2017) indicated that one of the predictors for the financial behavior of young adults was the background of their parents. Tang and Peter (2015) suggested that parents' financial experiences positively impact the financial knowledge of young adults and can serve as a substitute for formal financial education, which was shown in this study. Tang (2017) suggested that there was intergenerational consistency in the financial behavior of parents and their children; the financial behaviors of parents both directly and indirectly affect the financial behaviors of their children.

The findings in this study indicated that parental financial education was more effective than any other form of financial education to deter the use and the frequency of use of AFSs. However, for parents to provide adequate and sufficient financial education to their children, they need to be financially literate. These findings suggested that the parental financial education had a positive effect on the use and frequency of use of AFSs and that these participants made better decisions about AFSs than those who received financial education in high school, college, workplace, and the military. Participants who received financial education from their parents also made better decisions in terms of use and frequency of use of AFSs than those who had no financial education whatsoever. Cavanaugh (2013) argued that financial education should be provided in public schools and not be left entirely to parents/guardians due to the possibility of financial inequality.

Further, Widayati (2015) suggested that the socio-economic status of parents, family financial education, and learning financial education in universities had direct and indirect effects of on a child's financial behaviors. Van Campenhout (2015) suggested the need for parental involvement in the financial education programs, while other authors suggested starting the financial education of children as early as possible (Kim et al., 2017; Kadlec, 2015; Cavanaugh, 2013). The results of this study indicated that only parental financial education had a positive effect on the reduced use and frequency of use of AFSs. There are differences between parental financial education and formal financial education. The first difference is the length of that education. While formal financial education is usually received through one financial course, parental financial education may last for years, and it is ongoing. Second, parental financial education does not

necessarily follow a structure of topics to be covered, but, instead, involves learning by example. Observing the financial behaviors of their parents, children experience direct or indirect effects on their financial behaviors (Tang, 2017).

This study also indicated that participants who did not receive formal financial education were less likely to use AFSs and with less frequency than those who received formal financial education in high school, at college, at work, and in the military. As this study suggested, exposure to formal financial education increased the subjective, self-rated financial knowledge. Woodyard et al. (2017) indicated that the combination of low objective financial knowledge and high subjective financial knowledge may lead to higher usage of AFSs. Thus, ineffective formal financial education may falsely result in overconfidence in one's financial abilities and lead to riskier financial behavior and stimulate the use of high-cost borrowing, which was the case in this study.

Financial Education and Subjective Financial Knowledge

The results of this study suggested that participants who received financial education in high school, college, from their employer, from military, and from parents/guardians reported higher perceived financial knowledge than those participants who did not receive financial education. These results aligned with the findings in many other studies. The purpose of this study was to examine the relationship between the source of financial education and the perceived financial knowledge. The results indicated that participants who received financial education reported higher perceived financial knowledge, regardless of the source of that financial education. This means that

exposure to any source of financial education increases the subjective, self-rated financial knowledge.

Having overconfidence in one's own financial abilities can be dangerous, as was shown in this study. Thus, many findings in this study correlate with the findings of Woodyard et al. (2017), who indicated that the combination of low objective financial knowledge and high subjective financial knowledge may lead to higher usage of AFSs. Although exposure to any source of financial education increases the subjective financial knowledge, which is the consumer's perceived financial knowledge, it is salient to note that formal financial education programs need to increase the objective financial knowledge to have a positive impact on the use and frequency of use of AFSs. The findings in this study indicated that simple exposure to formal financial education might only lead to negative financial behaviors as it pertains to the use and frequency of use of AFSs.

Discussion

The results in this study indicated that exposure to formal financial education did not contribute to reduced use and lower frequency of use of AFSs but contributed to the exact opposite. Conversely, parental financial education was found to contribute to reduced use and lower frequency of use of AFSs. These results might be counter-intuitive, especially after considering the positive effects formal financial education had on other financial behaviors. Financial education was found to improve many consumers' financial behaviors. While formal financial education might contribute to many positive financial behaviors, it seems that it has the opposite effect on the use and

frequency of use of AFSs. It is salient to note that AFSs are not regular or traditional forms of credit. The interpretation of the study's results may be due to multiple factors.

Most U.S. consumers experience low savings and have a lack of or no emergency funds (Birkenmaier & Fu, 2016b). Additionally, credit might be unavailable from traditional financial institutions to many consumers due to the lack of credit history or the possibility they exhausted their credit capacity. It is very likely that in the event of an immediate need for funds, whether to make ends meet or satisfy a consumer purchase, AFSs might be the only option to consumers. Willis (2017) stated that financial literacy might be irrelevant to many, especially as it pertains to achieving material well-being and the impossibility of consumers to apply money management skills in the absence of financial resources and predictable income and expenses. Bruhn et al. (2016) found that financial education improved financial behaviors in terms of saving and budgeting, but they indicated that students were more likely to use high-cost credit for the purpose of consumer purchases. Thus, in the event of an immediate financial need, formal financial education and knowledge may be irrelevant to the use of AFSs.

Additionally, formal financial education might be ineffective because it rarely covers topics such as high-cost borrowings. Additionally, ineffective formal financial education may be due to inappropriate curriculum, teacher training, or teacher certification requirements (Urban et al., 2018; Geddes and Steen, 2016). The regulation or lack thereof of AFSs might also play a role in the use and frequency of use of AFSs. Finally, the technological advancement and convenience of AFSs (Birkenmaier & Fu, 2016b), as opposed to the lack of technology integration of traditional banking

institutions (Königsheim, Lukas, & Nöth, 2017), may prove more attractive to consumers and result in increased use of AFSs. This study focused only on financial education and did not consider other factors or covariates. As a recommendation, other factors and covariates should be explored to assess whether they contribute to the reduced use of AFSs. The results of this study warrant new analysis, including new variables and factors that might influence the reduced use of AFSs.

Limitations of the Study

There are several limitations in this study. One limitation involved assessing the relationship between the source of financial education and the frequency of use of AFS. The respondents received a limited number and range of answers from the researcher. Specifically, respondents could choose the number of times they used AFS, but the largest number was "four or more times." The variable might have been of higher quality if respondents were to enter their own response.

Another limitation of this study is the source of financial education. This study did not assess the effectiveness or the type of financial education that the respondents received. The researcher only analyzed the source of financial education and the participation of respondents. The researcher focused on examining the participants' exposure to financial education, not the quality of that education. The third limitation of this study was the research design. This study followed a nonexperimental, explanatory correlational design. The correlational design identified an association between two or more variables and is most commonly used for archival data from governmental databases on a national level (Omair, 2015). Some scholars have suggested establishing

an association between variables as the first criterion of causality (Creswell, 2019; Babbie, 2017; Omair, 2015); however, the prediction correlational design was not appropriate for this study because the researcher did not conduct a treatment or manipulation of variables.

Finally, another limitation was the sample for the study. The researchers of the 2015 state-by-state survey collected data using nonprobability quota sampling (Mottola & Kieffer, 2017), raising the question of the generalizability of the study. The researcher has assumed validity and representativeness of the sample due to the extensive use of the NFCS data in scholarly research (Harvey, 2019; Kim & Lee, 2018; Chatterjee et al., 2017; Allgood & Walstad, 2016; Birkenmaier & Fu, 2016a; Birkenmaier & Fu, 2016b; Cornwell & Murphy, 2016). Quota sampling addressed representativeness by selecting a sample with prespecified characteristics, with same characteristics distribution among the studied population (Babbie, 2017), which was the case with the data from NFCS. Finally, collecting an archival dataset limited the ability of the researcher to react and improvise in the research.

Recommendations

The findings and limitations in this study present an opportunity for recommendations for improvements and future research projects. Future researchers can collect a new sample, using the NFCS survey instrument with slight modifications. For example, the respondents would be able to enter the number of times they used AFSs, instead of choosing on a scale from "never" to "four or more times." The variable might

be of higher quality if respondents were to enter their own response, which might be higher than four.

Another recommendation would be to include a question in the survey about the type and length of financial education obtained at different sources. For example, the respondents should have an opportunity to provide more information about whether they have taken a course or an extracurricular program and how long such a course lasted. Such information will benefit future research because it will provide valuable insight and an opportunity to examine the effect of longer versus shorter financial education. Another valuable element that could be added to the survey instrument would be an open-ended question about why the respondents use AFSs. Also, a method to measure covariates that may affect the sample, such as race/ethnicity, gender, socioeconomic status, should also be included.

This study found that participants who received financial education in high school were more likely to use AFSs and to use them with greater frequency than those participants who received no financial education. Other studies, however, confirmed the effectiveness of state-mandated high school financial education. Perhaps, a future research study should compare the quality of state-mandated high school financial education versus non-mandated high school financial education, especially when assessing individual financial behaviors about the use of AFSs. The findings in this study also indicated that participants who received financial education from an employer were more likely to use auto-title loans and rent-to-own stores and to use them more frequently than those without financial education. It would be useful to implement and assess an

intervention financial education program at a workplace that would have a broader scope, beyond savings and retirement planning, and assess the effects of such financial education on other financial behaviors.

The participants who received financial education in college were more likely to use auto-title loans and with greater frequency than those without financial education. Future research should attempt to account for college financial education and state regulations of auto-title loans. Also, future research should attempt to compare college financial education that has a focused financial education intervention based on students' characteristics, and a universal college financial education, especially as it pertains to the use and frequency of use of AFSs. It would also be useful for both faculty and colleges to understand the type of financial education curriculum they need to develop to affect positive change in students' financial behaviors.

Further, participants who received financial education in the military were more likely to use AFSs and with greater frequency than those participants who did not receive financial education. Perhaps, researchers can develop and deliver an intervention approach, specifically designed for military members, similar to the state-mandated high school financial education, to assess the financial behavior of members of the military. Finally, the results of this study indicated that receiving financial education from parents/guardians was associated with lower odds of using and lower frequency of using AFSs. Integrating parents in school-based and local organizations' efforts to provide financial education could be salient in positively affecting the financial behaviors of their children from an early age.

Future research should also consider covariates in their study. Finally, future research may need to address the relationship between two or more types of financial education and the use and frequency of use of AFSs. The researcher in this study examined each source of financial education separately. It is highly likely that some of the recipients obtained financial education at two or more venues. For example, a participant might have received financial education from their parents, in high school, and in college. The different combinations of venues where financial education was received might provide valuable insights into the possible effects of more prolonged exposure to financial education.

Implications

This study could lead to positive social change by examining the extent of the relationship between the sources of financial education and the use and frequency of use of unhealthy, high-cost borrowings. The findings in this study should inform policymakers about the steps needed to remedy the problem of continuous AFS usage. Decreased use of AFSs could contribute to improved emotional and physical health (Eisenberg-Guyot et al., 2018; Sweet et al., 2018) and improved welfare (Lim et al., 2014). Willis (2017) argued that financial literacy is neither necessary nor enough to improve the well-being of individuals and society, which was the case with the use of AFSs in this study. Instead, the goal should be a financial education that fosters finance-informed citizens with the capacity for civic engagement to influence economic policies and financial regulation (Willis, 2017). This study revealed that exposure to formal financial education is not the only or even the primary factor that determines positive

financial behaviors as it pertains to the use and frequency of use of AFSs. Instead, this study revealed that positive financial behaviors, as they pertain to the use and frequency of use of AFSs, may be determined by other factors beyond formal financial education alone.

Numerous studies examined the AFS industry and its effects on consumers (Birkenmaier & Fu, 2016b; Horowitz, 2017; Harvey, 2019). Many researchers have studied the effects of financial education on consumer behavior as well (Cornwell and Murphy, 2016; Lee et al., 2017; Xiao & Porto, 2017). However, none have examined the relationship between various sources of financial education on the use and frequency of use of AFSs. This study filled the identified gap in the literature by contributing to the existing body of knowledge about the relationship between these critical variables. Yet, this study did not uncover a direct, causal relationships between these variables, due to the limitations of the cross-sectional data. However, some scholars have suggested that establishing an association between variables is the first criterion of causality (Creswell, 2019; Babbie, 2017; Omair, 2015).

This study revealed a negative relationship between formal financial education and reduced use of AFSs, which suggests an absence of a direct causal relationship between formal financial education and reduced use of AFSs. Thus, this study may serve as a first step in investigating the causal relationship between financial education and debt behavior, and hopefully, identify new factors that may reveal how to deter consumers from unhealthy, high-cost borrowings. Future studies must consider other factors, beyond this study, that might influence the use of AFSs because exposure to

formal financial education alone does not seem to reduce the use and frequency of use of AFSs.

This study could serve as a basis for future experimental research utilizing the TPB and the TTM. By conducting an intervention that focuses on consumers' planning and budgeting, a future study could contribute to policies and behaviors that enable individuals to avoid unhealthy financial behaviors. Additionally, this study could serve as the basis for further research on the specific types of financial education American consumers receive and lead to an experimental design that could measure the effects of financial education on the use of high-cost borrowing vehicles. Such future research should be different from this study because it should allow participants to explain their behavior and account for more covariates affecting their behavior. This study may also lead to positive social change by informing policymakers about the steps needed to remedy the problem of continuous AFS usage. Finally, this study could contribute to creating financially capable and financially informed citizens by serving as a foundation for future research to determine whether multiple sources of financial education deter the use and frequency of use of AFSs, as formal financial education obtained from multiple sources may have different effects from those who received formal financial education from only one source.

Conclusions

There is an emerging problem in the United States regarding access and use of credit (Colarusso, 2017). The limited access to, or exhaustion of, traditional credit caused consumers to seek AFSs (Colarusso, 2017; Bhutta, Skiba, & Tobacman, 2015).

While many studies explored the effects of financial education on positive financial behaviors, there was a lack of research that explored the effects of the various sources of financial education on the use and frequency of use of AFS This study filled a gap in the literature by identifying the relationship between the different sources of financial education and the use and frequency of use of AFSs.

This study revealed that exposure to formal financial education did not contribute to reduced use and lower frequency of use of AFSs but contributed to the exact opposite, which aligned with the suggestions in (Willis, 2017), that financial literacy might neither be necessary nor enough to improve the well-being of individuals and society. Thus, this study revealed that exposure to formal financial education might be more dangerous than no financial education at all because it might ingrain false self-confidence in a consumer about his/her financial knowledge and abilities, which may result in unhealthy financial behaviors. The findings in this study suggested that only parental financial education contributed to the reduced use and lower frequency of use of AFSs. Using this study as a foundation and expanding it with future research that would examine variables beyond this study, may contribute to positive social change by providing valuable insights about the steps to deter consumers from unhealthy, high-cost borrowings.

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